

# BOEING



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CODE IDENT. NO. 77272

NUMBER

D210-11168-3-Volume 7 of 13

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CH-46 COMPOSITE ROTOR BLADE FLIGHT

STRESS SURVEY DATA, PLOTTED AFT ROTOR

ROTATING AND STATIONARY CONTROLS

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# BOEING VERTOL COMPANY

P.O. BOX 16858 PHILADELPHIA, PENNSYLVANIA 19142

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APPROVED BY	Lunn L. Marchinsk	D. Hardy	DATE /2-9	-79_
	K.White/W.W			has been approved

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FORM 46280 (5/73)

SHEET 1 403 682 LB

THE BOEING COMPANY

NUMBER D210-11168-3 Vol. 7 REV LTR

LIMITATIONS



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All revisions to this document shall be approved by the above noted organization prior to release.

FORU 44281 (3/47)

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FORM 462 M (9/67)

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FORM 40200 (7/07)



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FORM 46200 (7/07)

NUMBER

Vol. 7

PREPARED BY: CHECKED BY: THE BOEING COMPANY

DATE:

J. Bendo 8/28/78

REV LTR MODEL NO.

#### ABSTRACT

This report volume presents plotted aft rotor rotating and stationary control loads measured during the CH-46 Composite Rotor Blade Flight Stress Survey.

#### KEYWORDS

CH-46E

Composite

Rotor Blade

Flight Stress Survey

Alternating and Steady Loads

8/28/78

NUMBER D210-11168-3 REV LTR Volume 7 Volume 7 MODEL NO.

# THE BOEING COMPANY DATE:

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GW GW GW GW GW GW GW GW GW GW GW GW GW	W = 20800 W = 20800 W = 24300 W = 24300 W = 24300 W = 20800 W = 20800 W = 24300 W = 24300 W = 24300 W = 24300 W = 24300	lbs.,	C.G. C.G. C.G. C.G. C.G. C.G.		9.7" Aft 13.2" Fwd Aft (4.4" Fwd) 1.5" Aft (Ext. 22.4" Fwd 9.7",Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	199 208 217 224 231 332 233 242 251 258
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GW GW GW GW GW GW GW GW GW GW GW GW	W = 24300 W = 24300 W = 24300 Et R.H. C W = 20800 W = 20800 W = 24300 W = 24300 W = 24300 W = 24300 W = 24300	lbs., lbs., lbs., lbs., lbs., lbs., lbs., lbs., lbs.,	C.G. C.G. k C.G. C.G. C.G.		13.2" Fwd Aft (4.4" Fwd) 1.5" Aft (Ext.  22.4" Fwd 9.7",Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	217 224 231 332 233 242 251 258
GN GN GN GN GN 4.8 At GN GN GN GN GN GN	N = 24300 $N = 24300$ $N = 24300$ $N = 20800$ $N = 20800$ $N = 24300$	lbs., lbs., lbs., lbs., lbs., lbs., lbs., lbs.,	c.g. c.g. c.g. c.g. c.g. c.g.		Aft (4.4" Fwd) 1.5" Aft (Ext. 22.4" Fwd 9.7",Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	224 231 332 233 242 251 258
GN 4.7 At GN GN GN 4.8 At GN GN GN GN GN	N = 24300 Et R.H. C $N = 20800$ $N = 20800$ $N = 24300$	lbs., /P Lin) lbs., lbs., lbs., lbs.,	C.G. C.G. C.G. C.G.		1.5" Aft (Ext.  22.4" Fwd 9.7", Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	231 232 233 242 251 258
4.7 At GW	Et R.H. C V = 20800 V = 20800 V = 24300 V = 24300 V = 24300 Et Latera V = 20800	lbs., lbs., lbs., lbs., lbs.,	C.G. C.G. C.G. C.G.		22.4" Fwd 9.7",Aft 13.2" Fwd Aft (4.4" Fwd)		233 242 251 258
GN GN GN 4.8 At GN GN GN GN GN	W = 20800 W = 20800 W = 24300 W = 24300 W = 24300 Et Latera W = 20800	lbs., lbs., lbs., lbs.,	C.G. C.G. C.G.	:	9.7",Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	233 242 251 258
GW GW GW 4.8 A! GW GW GW 4.9 A!	W = 20800 W = 24300 W = 24300 W = 24300 Ft Latera W = 20800	lbs., lbs., lbs.,	C.G. C.G. C.G.	:	9.7",Aft 13.2" Fwd Aft (4.4" Fwd)	Cargo)	242 251 258
GM GM GM GM GM GM GM GM	N = 24300 N = 24300 N = 24300 Et Latera N = 20800	lbs., lbs., lbs.,	C.G. C.G.	-	13.2" Fwd Aft (4.4" Fwd)	Cargo)	251 258
GM GM 4.8 At GM GM GM GM 4.9 At	<pre>% = 24300 % = 24300 ft Latera % = 20800</pre>	lbs.,	C.G.	-	Aft (4.4" Fwd)	Cargo)	258
GM 4.8 Af GM GM GM GM 4.9 Af	<pre>1 = 24300 ft Latera 7 = 20800</pre>	lbs.,	C.G.	:	Aft (4.4" Fwd) 1.5" Aft (Ext.	Cargo)	258 265
4.8 At GW GW GW GW GW	t Latera = 20800			-	1.5" Aft (Ext.	Cargo)	265
GW GW GW GW 4.9 At	- 20800	l Link					
GN GN GN 4.9 A1							266
GN GN GN 4.9 A1		lbs.,	C.G.	=	22.4" Fwd		267
GW GW GW 4.9 At	- 20000				9.7" Aft		276
GW GW 4.9 A1	= 24300	lbs.,	C.G.	=	13.2" Fwd		285
GR 4.9 A1	- 24300	lbs.,	C.G.	=	Aft (4.4" Fwd)		292
	= 24300	lbs.,	C.G.	=	1.5" Aft (Ext.	Cargo)	299
GN	t Longit	udinal	Link				300
	= 20800	lbs	C.G.	-	22.4" Fwd		301
					9.7" Aft		310
					13.2" Fwd		319
GW	= 24300	lbs.,	C.G.		Aft (4.4" Fwd)		326
GW	= 24300	lbs.,	C.G.	-	1.5" Aft (Ext.	Cargo)	333
.10 Af	t Collec	tive/P	itch Y	ok	e		334
G	V = 20800	lbs.	C.G.	=	22.4" Fwd		335
					9.7" Aft		344
					13.2" Fwd		353
					Aft (4.4" Fwd)		360
GW					ALL (4.4 FWG)		(6)

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PREPARED BY: J. Bendo

CHECKED BY:

THE BOEING COMPANY DATE:

8/29/78

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#### REFERENCES

- Vertol Report D210-11168-1 "CH-46 Composite Rotor Blade Flight Test Qualification Test Plan" March 30, 1977
- Vertol Report D210-11168-2 "CH-46 Composite Rotor Blade Flight Test Report" May 15, 1978
- Boeing Vertol Report D210-11168-3 Volume 1 of 13, CH-46 Composite Rotor Blade Flight Stress Survey Data
- Boeing Vertol Report D210-11168-3 Volume 11 of 13, CH-46 Composite Rotor Blade Flight Stress Survey Data, Tabulated Forward and Aft Control Loads

FORM 11180 (6/67)

D210-11168-3

PREPARED BY:

J. Bendo

NUMBER Vol. 7

REV LTR MODEL NO.

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#### 1. INTRODUCTION

A flight stress survey was conducted on a CH-46 helicopter with A02R1702 composite rotor blades. The test was conducted in accordance with Paragraphs 4.3.2 and 4.7 of Reference 1. General test description and pilot comments are included in Reference 2.

The tests were conducted at the Boeing Vertol Flight Test Facility at Ridley Township, Pennsylvania, during the period of June 1977 through November 1977.

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8/29/78

SUMMARY

A flight stress survey and structural demonstration was conducted on the #1 CH-46E Helicopter, BuNo. 153372 (S/N 2268).

The components under test were the A02R1702 composite rotor blades and the A02R1710 blade socket.

This volume contains measured steady and alternating aft rotor rotating and stationary controls loads plotted versus true airspeed. The same data is tabulated in Volume 11.

PREPARED BY: J. Bendo

D210-11168-3 NUMBER Vol. 7 REV LTR MODEL NO.

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#### DATA PRESENTATION

This report contains measured steady and alternating aft rotating and stationary control loads. The data is presented as plots versus true airspeed. The steady and alternating values are plotted separately and appear together as two plots per page for various level flight and maneuver conditions. The load levels shown represent the maximum alternating load cycle occurring during the particular flight condition. This same data is tabulated in Volume 11.

Detailed flight condition parameters and a complete tabulated summary of maneuvers for each flight can be found in Volume 1 of this report.

CHECKED BY:

8/31/78

#### 3.1 Gage Identification and Index

Data plot indexing, strain gage identification and instrumentation code information for data presented in this volume are as follows:

DATA CODE	MEASUREMENT		DATA
ACTIVE SPARE	NAME	UNITS	PAGE #
49250 69250	Aft Pitch Link, Green Blade	(LB)	21
49660 69660	Aft Pitch Link, Yellow Blade	(LB)	55
49580 69580	Aft Pitch Link, Red Blade	(LB)	97
49460 49440	Aft Drive Scissors Arm	(LB)	130
49670 65100	Aft Static Scissors	(LB)	164
45010 65010	Aft LH C/P Link	(LB)	198
45020 65020	Aft RH C/P Link	(LB)	232
45030 65030	Aft Lateral Link	(LB)	266
45040 65040	Aft Longitudinal Link	(LB)	300
45050 65050	Aft Coll/Pitch Yoke	(LB)	334

#### NOTES:

- 1. A complete description of the instrumentation for this stress survey can be found in Volume 1.
- 2. A flight by flight summary of operative gages can be found in Reference 2.
- 3. The spare gages were utilized when the active gages proved inoperable.

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TE: 1/2/79

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3.2 Sign Convention

The following table summarizes the sign convention adhered to for the gages presented in this volume.

#### GAGE MEASUREMENT NAME

Aft Pitch Link, Green Blade Aft Pitch Link, Yellow Blade Aft Pitch Link, Red Blade Aft Drive Scissors Arm Aft Static Scissors

Aft LH c/p Link Aft RH c/p Link

Aft Lateral Link Aft Longitudinal Link Aft Coll/Pitch Yoke

#### (+) POLARITY CONDITION

Tension
Tension
Tension
Blade Lagging
Swashplate CW
Tension
Tension
Tension
Tension

Boost Actuator Extended

9/5/78



THE BOEING COMPANY DATE:

#### 3.3 Plot Format

The data plots have been grouped by common flight conditions and maneuvers and are presented in the order outlined by the data plot format table included on the next page.

For identification of data plots the plot code number in the right hand column of the table is printed on each corresponding plot chart.

Please note that many symbols are used more than once.

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## PLOT FORMAT

GROSS WEIGHT LBS.	C.G. IN.	HD FT.	RPM	CONDITION	PLOT CODE NO.
20800	22.4"Fwd	2000	264	Level Flt.	- 1
		14000		Level Flt.	- 2
		All		Pullups (PWR ON&OFF), P.P.D. Rec.	-11
				Turns (PWR ONSOFF)	-15
				Control Rev.'s (PWR ON)	-19
	7			Control Rev.'s (PWR OFF), Flares	-23
	<b>+</b>	+		P.P.D.'s, Autorotation	-27
	9.7"Aft	2000		Level Flt.	- 3
		6000		Level Flt.	- 4
		14000	1	Level Flt.	- 5
		6000	248	Level Flt.	-10
		All	264	Pullups (PWR ON&OFF), P.P.D. Rec.	-12
				Turns (PWR ON&OFF)	-16
			.	Control Rev.'s (PWR ON)	-20
				Control Rev.'s(PWR OFF), Spiral Desc., Flares	-24
†	+	1		P.P.D.'s Autorotation	-28
24300	13.2"Fwd	2000		Level Flt.	- 6
		8000		Level Flt.	- 7
		A11		Pullups (PWR ON&OFF)	-13
				Turns (PWR ON&OFF)	-17
				Control Rev.'s (PWR ON)	-21
				Spiral Descent, Flares	-25
	-		1	P.P.D.'s, P.P.D. Rec., Autorotation	-29

CONTINUED ON NEXT PAGE

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9/5/78

## Plot Format (Continued)

GROSS WEIGHT LBS.	C.G. IN.	HD FT.	RPM	CONDITION	CODE NO.
24300	4.4"Fwd	2000	264	Level Flt.	- 8
		8000	1	Level Flt.	- 9
		All		Pullups (PWR ON&OFF)	-14
				Turns (PWR ON&OFF)	-18
				Control Rev.'s (PWR ON)	-22
				Spiral Descent, Flares	-26
	<b>\</b>	+		P.P.D.'s, Autorotation	-30
+	1.5"Aft	2000	+	Level Flight (External Cargo)	-35

PREPARED BY:

J. Bendo

D210-11168-3 NUMBER Vol. 7

REV LTR MODEL NO.

THE BOEING COMPANY DATE:

CHECKED BY:

9/5/78

4. PLOTTED DATA

PREPARED BY: J. Bendo

NUMBER D210-11168-3 REVLTR Volume 7

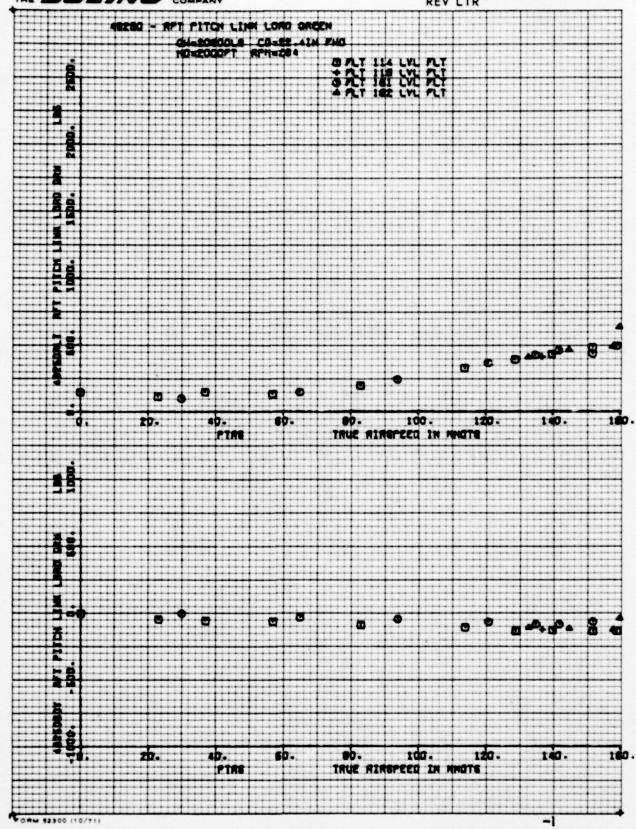
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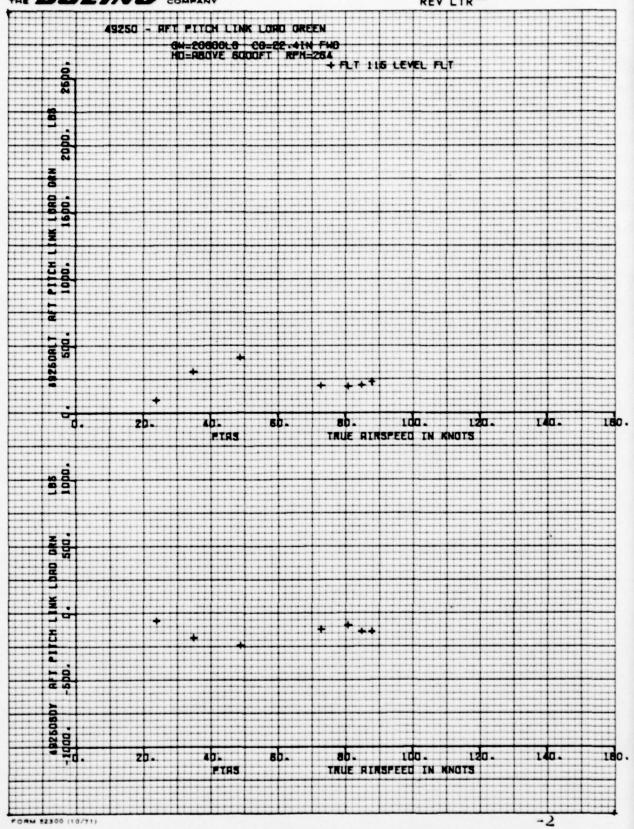
THE BOEING COMPANY DATE:

CHECKED BY:

8/8/78

4.1 Aft Pitch Link, Green Blade





NUMBER VOLUME 7 THE BOEING COMPANY REV LTR 49250 - RET PITCH LINK LOAD OREEN H-2000000 CO-28 -4 EN FHO RPH-264 O OP PULLUP PHR ON >6000FT
O ING PULLUP PHR ON >6000FT
+ UNG PULLUP PHR ON 2000FT
+ UNG PULLUP PHR ON 2000FT
X UNG PULLUP PHR OFF 2000FT
X UNG PULLUP PHR OFF 2000FT
+ PPO RECOVERY >6000FT
X HPO RECOVERY 2000FT O 0 × 120. Tio. IBO. PTAS TRUE RIRSPEED IN MNOTS 48 X P E

SHEET 24

100.

TRUE AIRSPEED IN KNOTS

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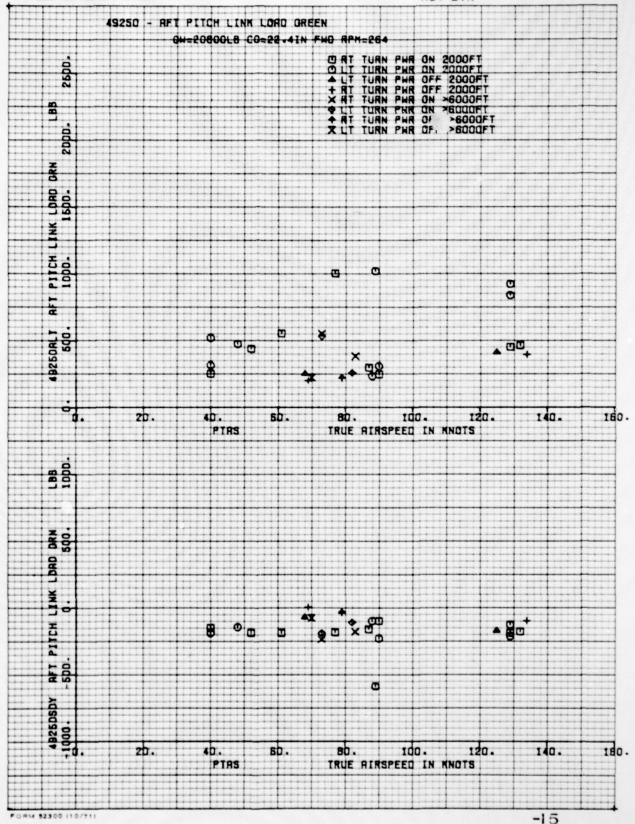
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FORM \$2300 (10/71)

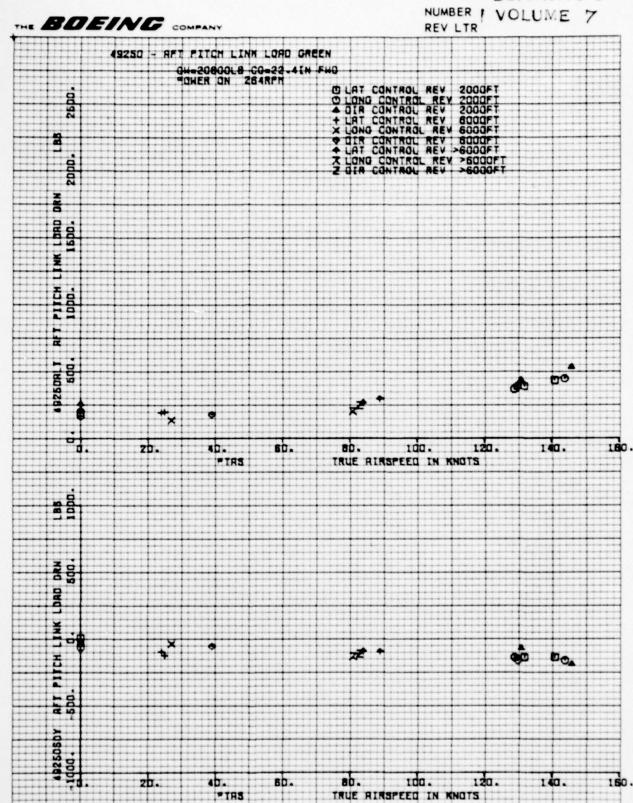
NUMBER |

THE BOEING COMPANY

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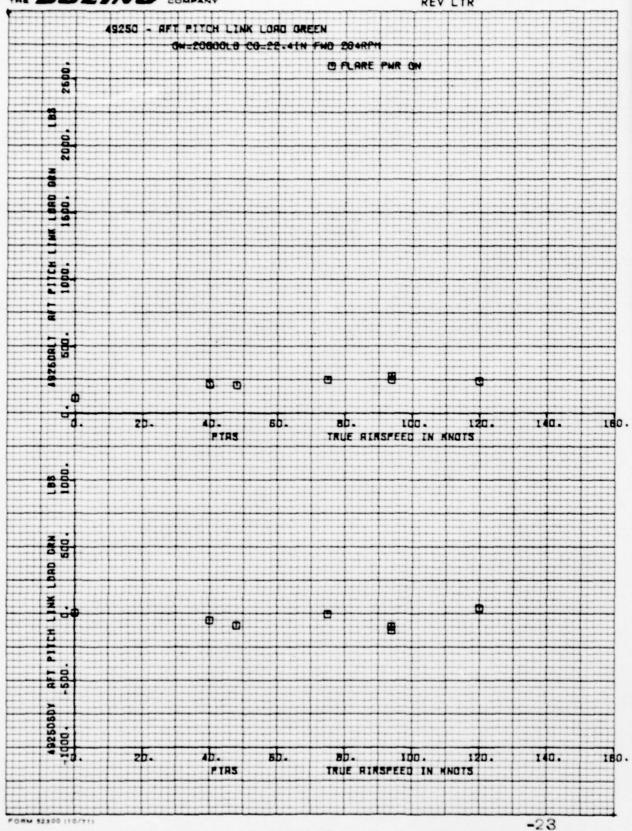


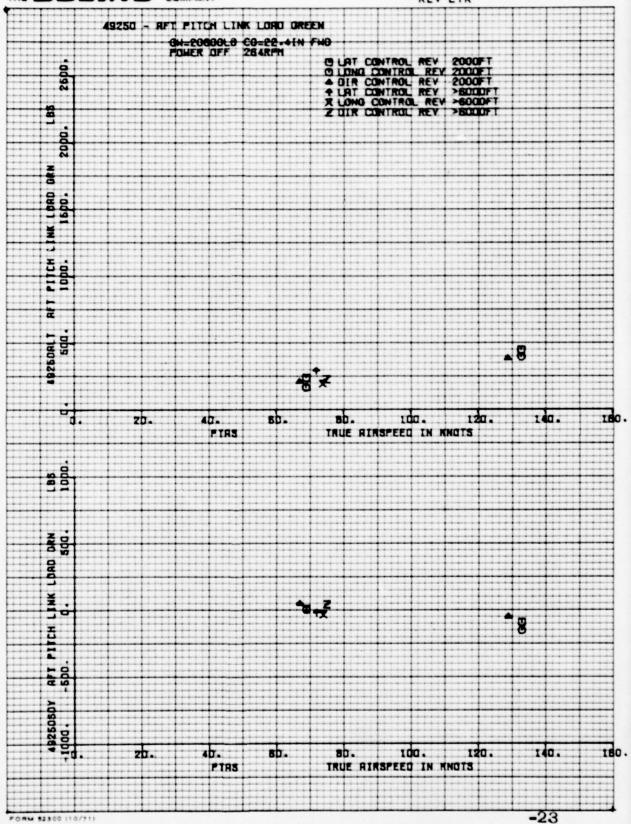
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FORM \$2300 (10/71)

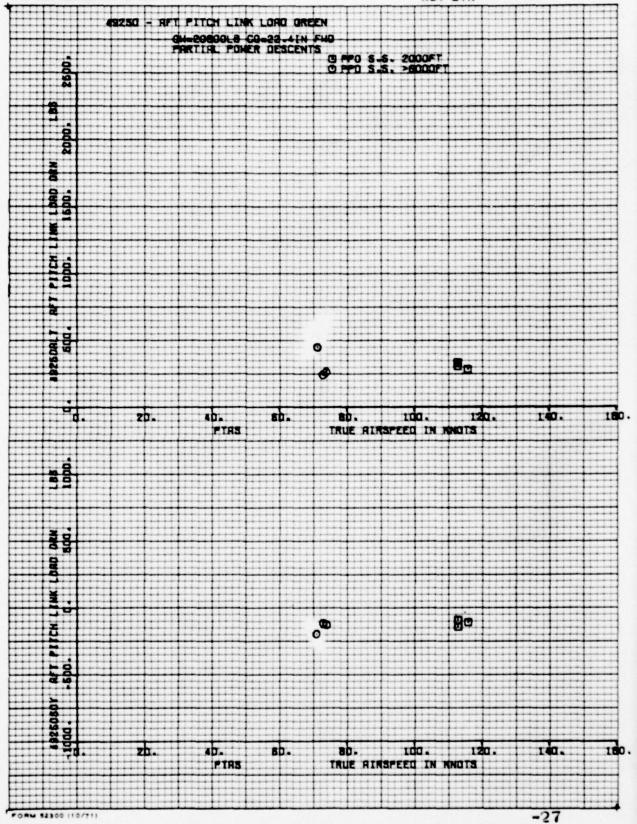
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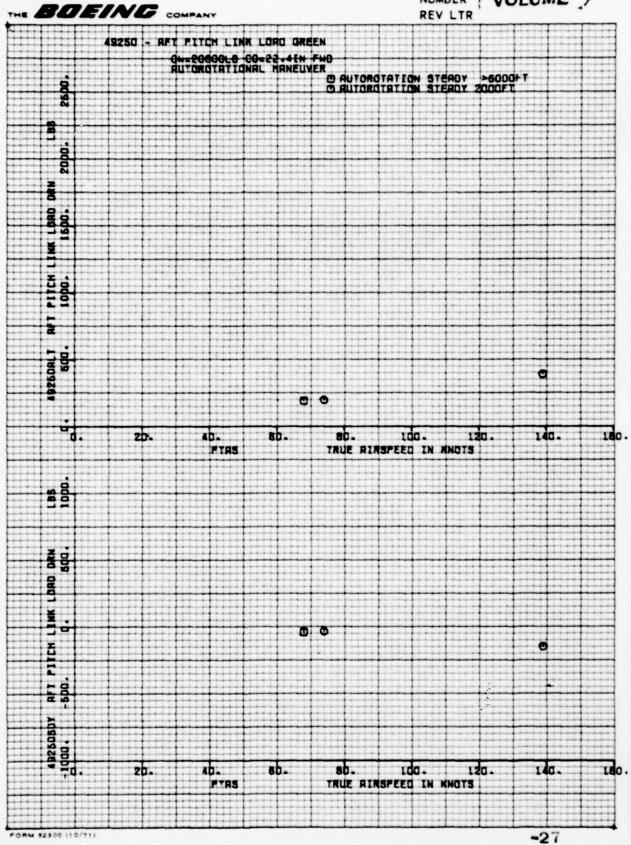


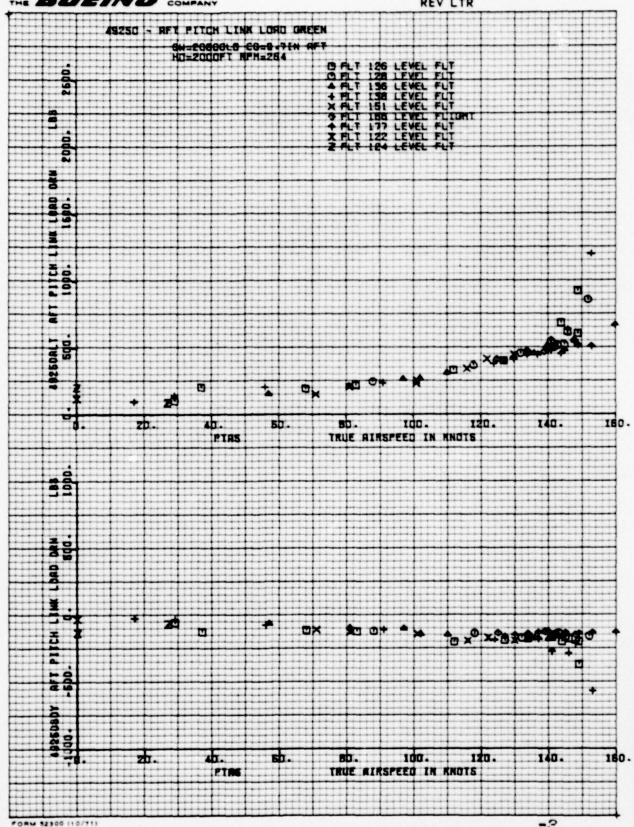
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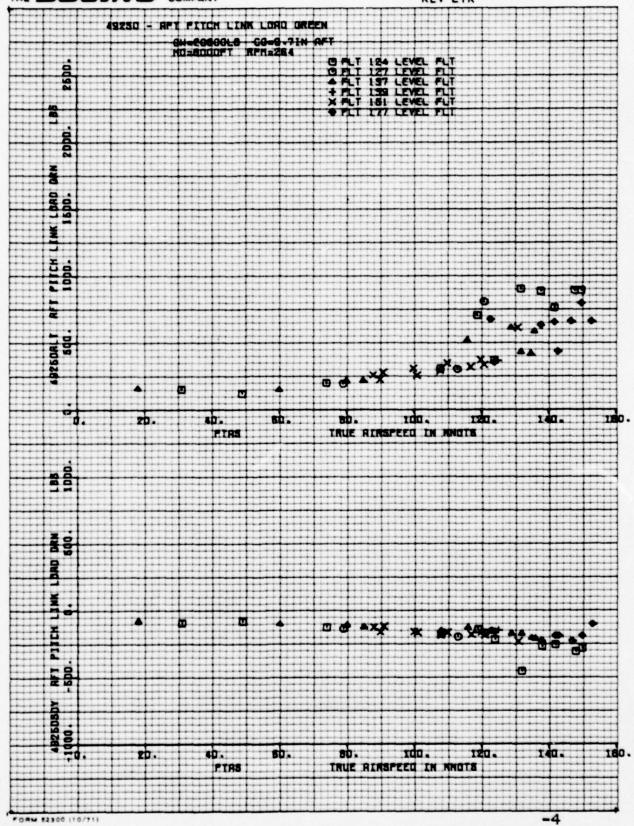
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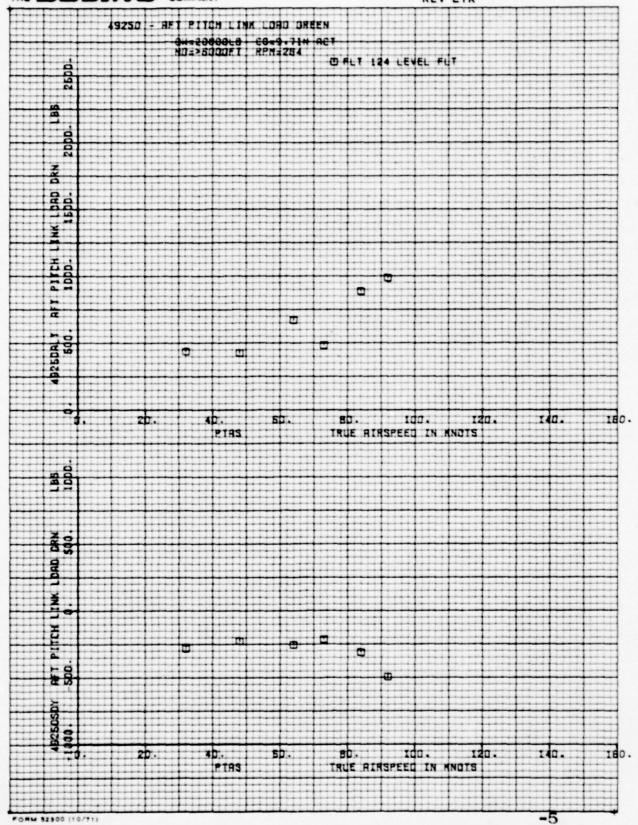


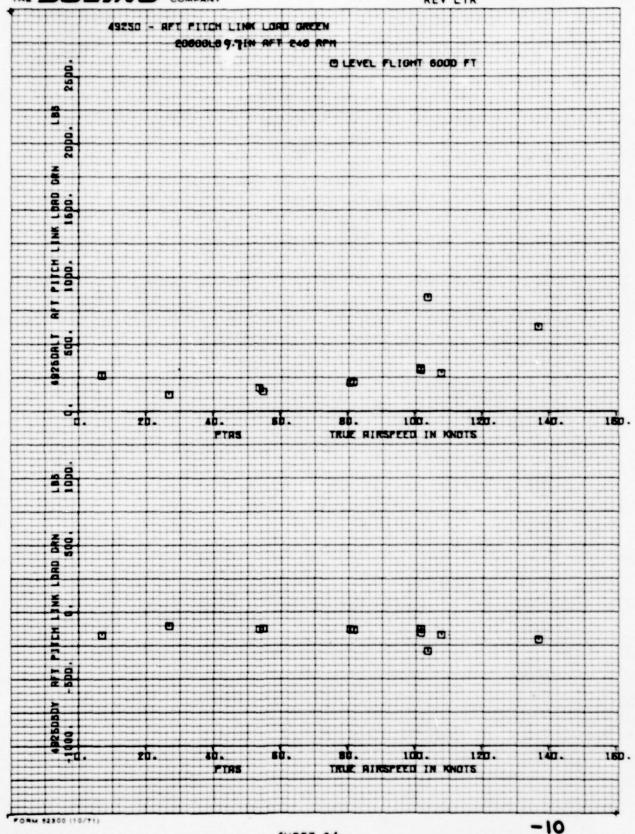
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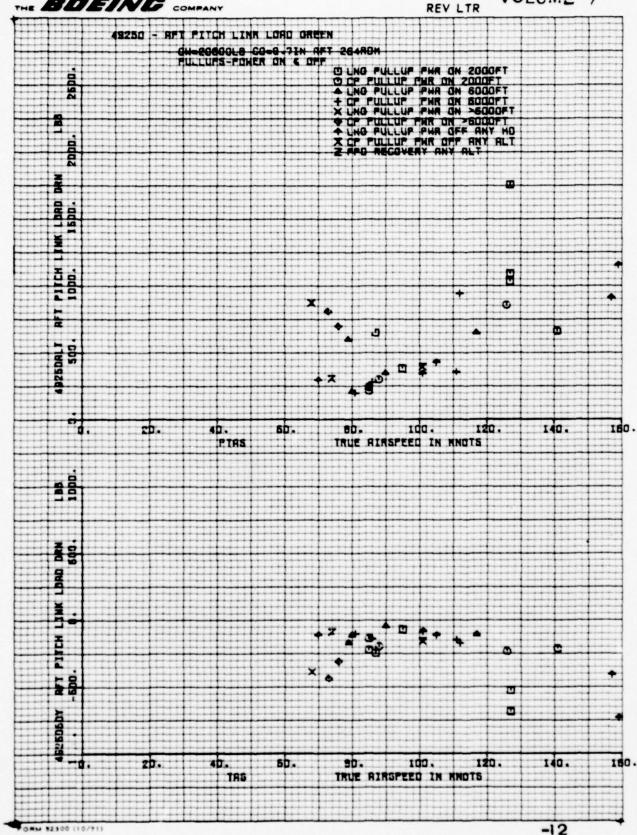






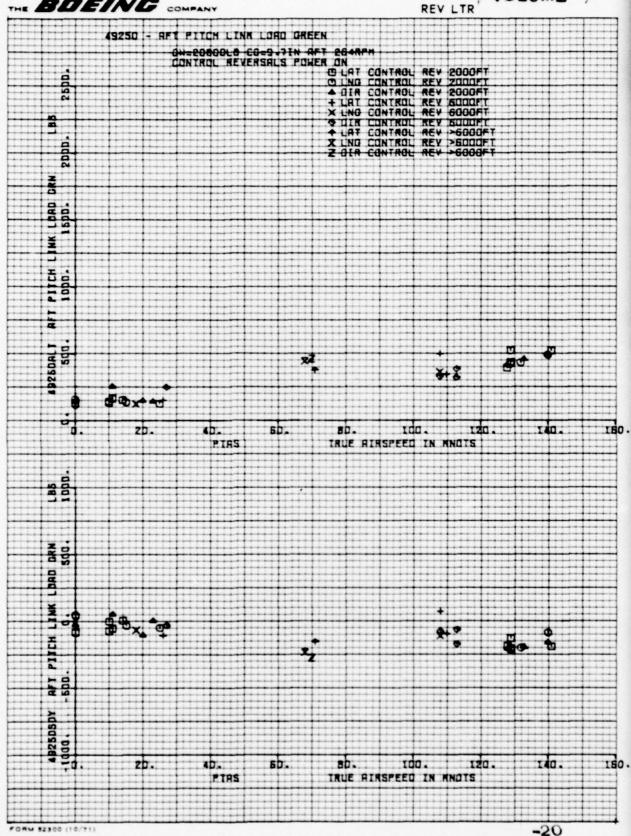


NUMBER ! VOLUME 7

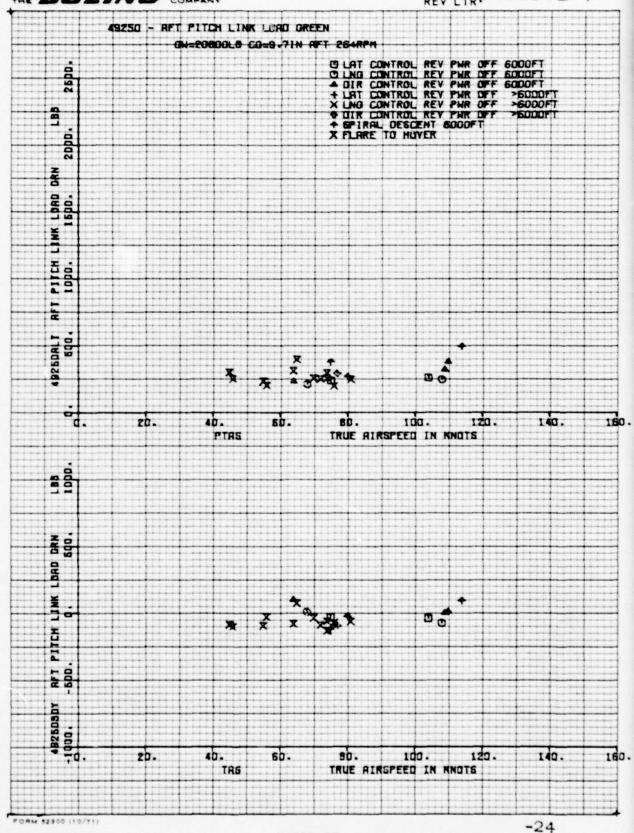


NUMBER THE BOEING COMPANY REV LTR 49250 - RET PITCH LINK LORD GREEN MU-20000LO CO-0 7IN AFT 264AFM S RT TURN PHR ON 2000FT
O LT TURN PHR ON 2000FT
A RT TURN PHR ON 5000FT
+ LT TURN PHR ON 5000FT
X RT TURN PHR ON 5000FT
O LT TURN PHR ON 5000FT
X LT TURN PHR OFF 5000FT
X LT TURN PHR OFF 5000FT
Y LT TURN PHR OFF 5000FT
Y LT TURN PHR OFF 5000FT PITCH LINK L **4** 00 0 AFT 0 CD 20. AD. 60. 100. 140. 80. 180. 120. PIRS TRUE RIRSPEED IN MNOTS 0 DO 20 00 0 O D 20. 40-60. 80. 100. 120 . 140. 160 . TRUE AIRSPEED IN MNOTS FTAS

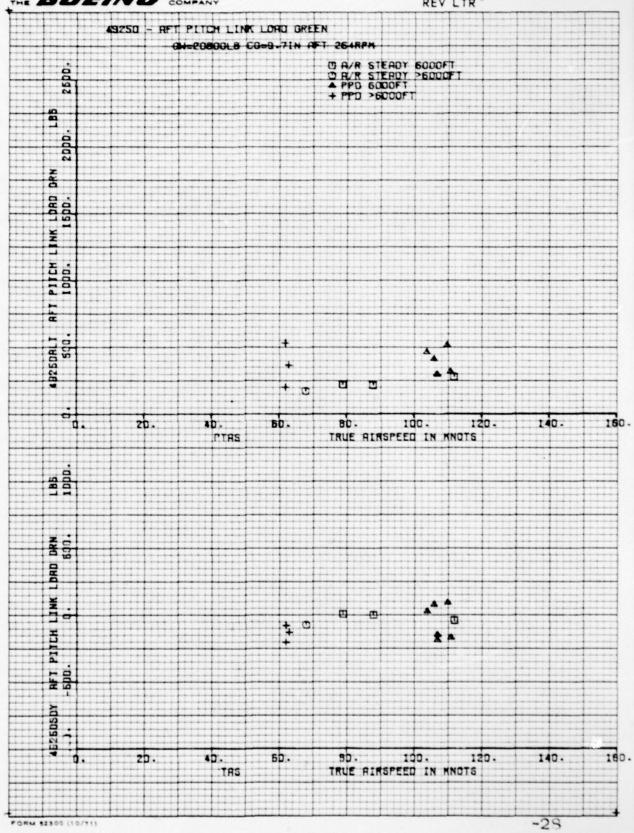
FORM \$2300 (10/71)









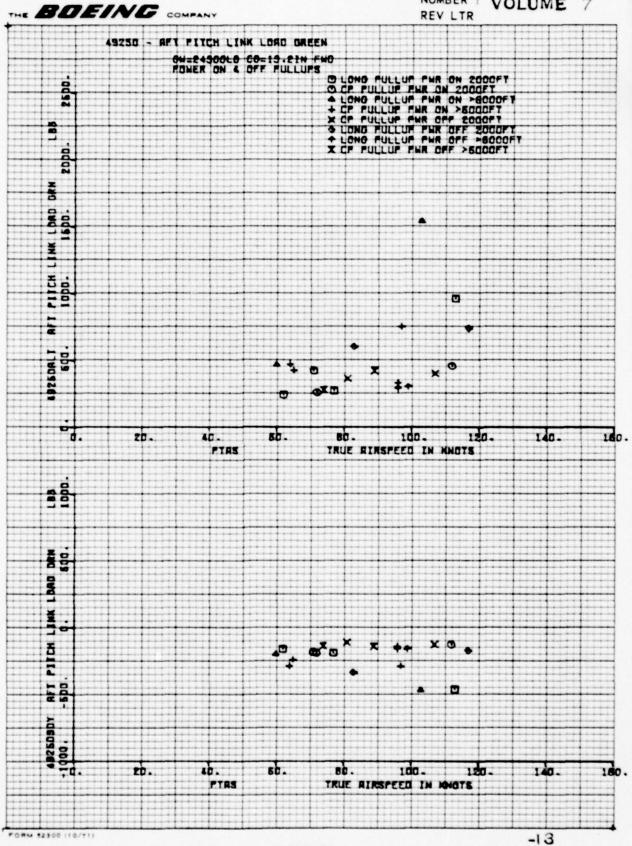


NUMBER! VOLUME 7

THE BOEING COMPANY

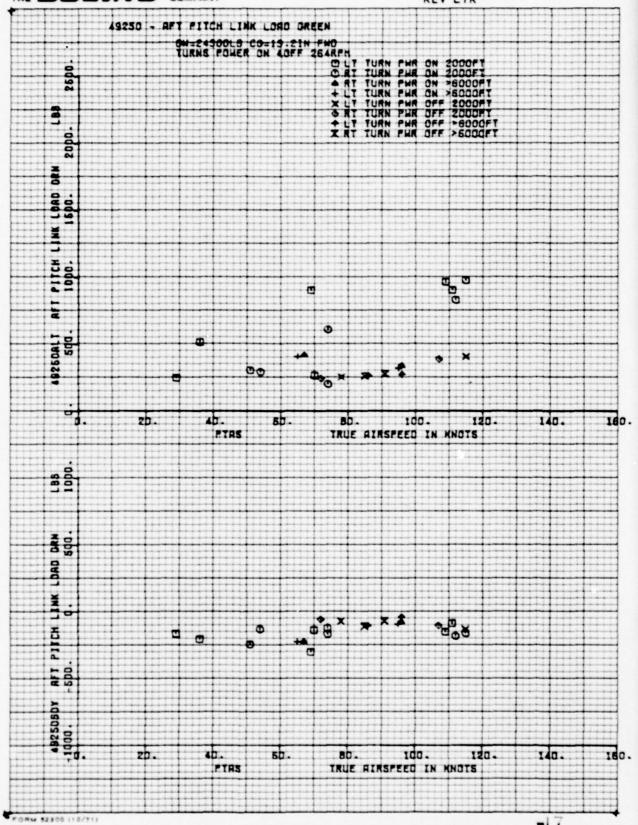
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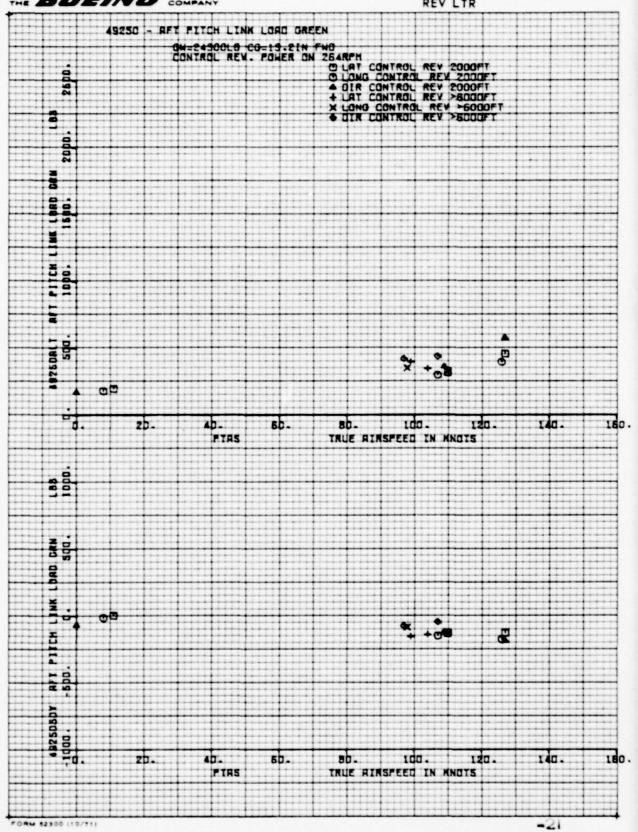
THE BOEING COMPANY 49250 - RFT PITCH LINK LORD GREEN 04-24500L8 CG-15-21N FW0 HD=>6000FT RPH=264 OFLT 121 LEVEL FLT 1000. ISPO. m 0 0 AD. ıda. 140. zb. PIRS TRUE RINSPEED IN KNOTS 1 080 AFT PITCH LINK -500. 0. M 140. ıda. 150. AD. 80. zb. TRUE RINSPEED IN KNOTS PIRS FORM \$2300 (10/71)

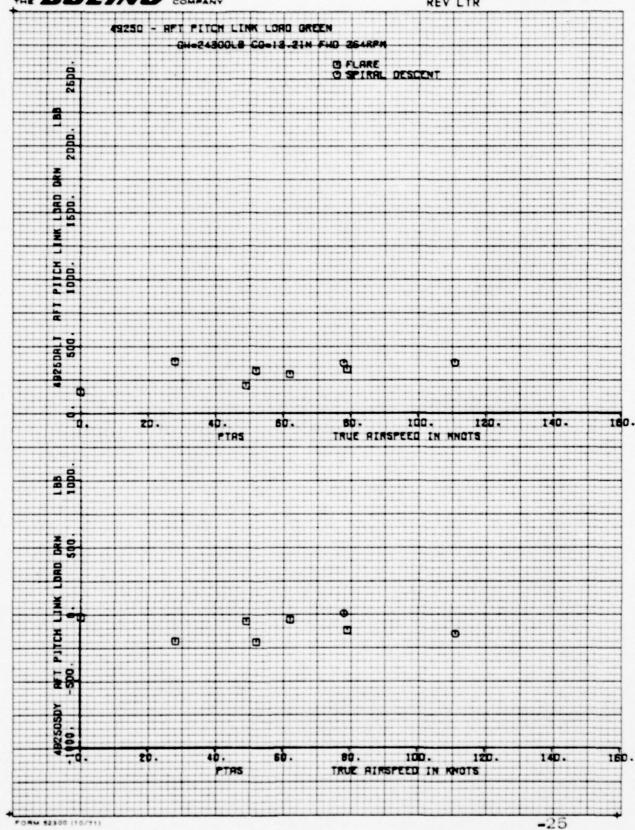


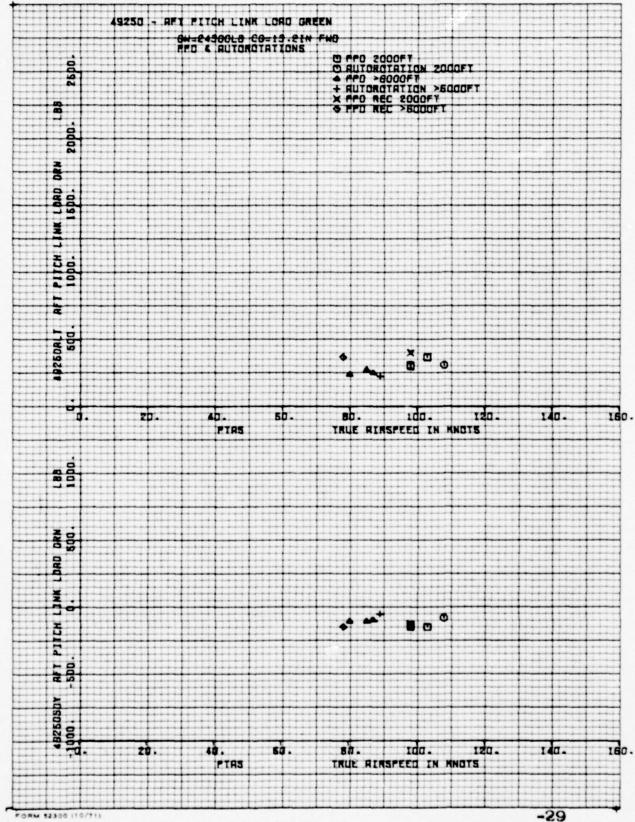
THE BOEING COMPANY

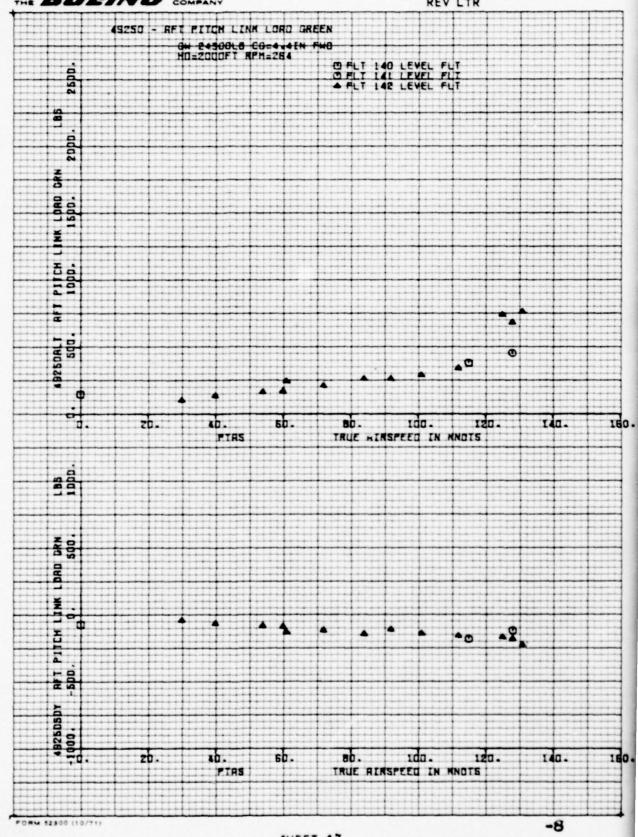
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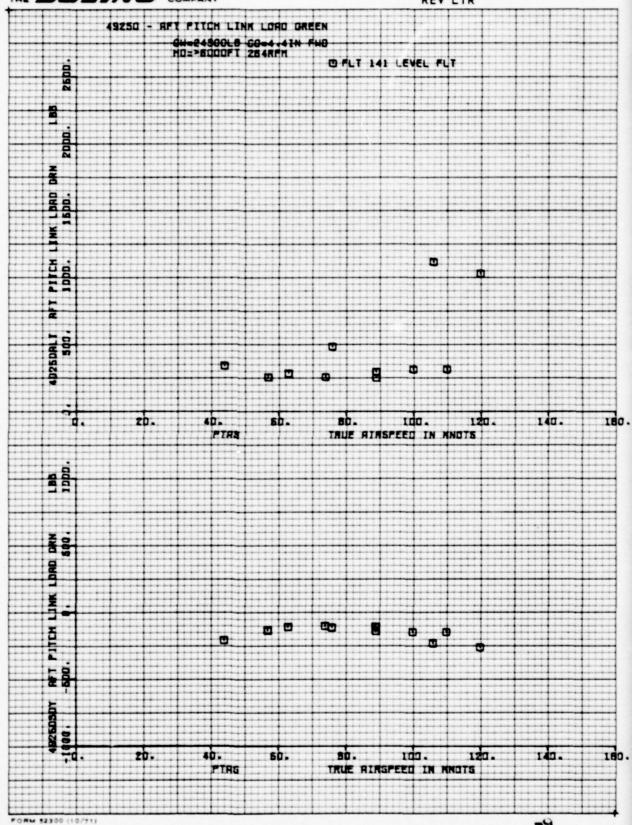


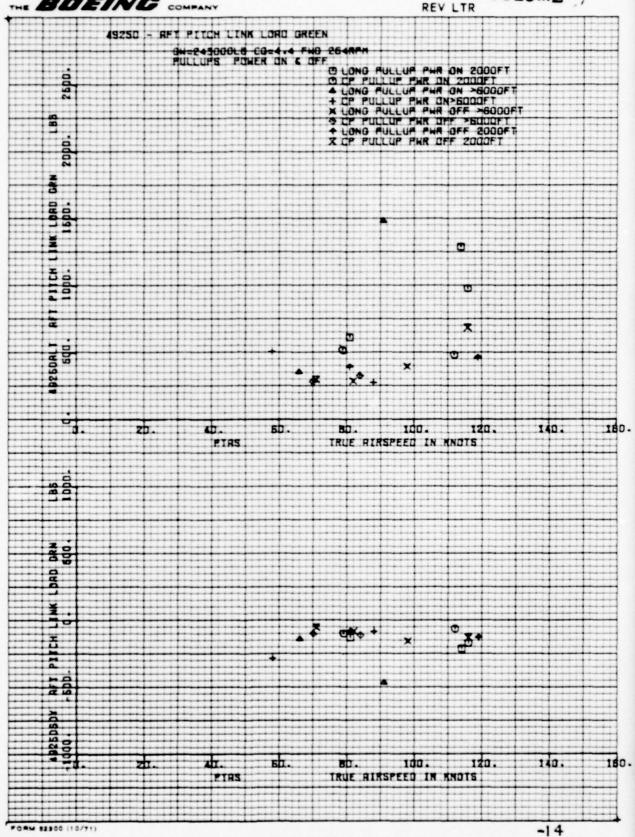




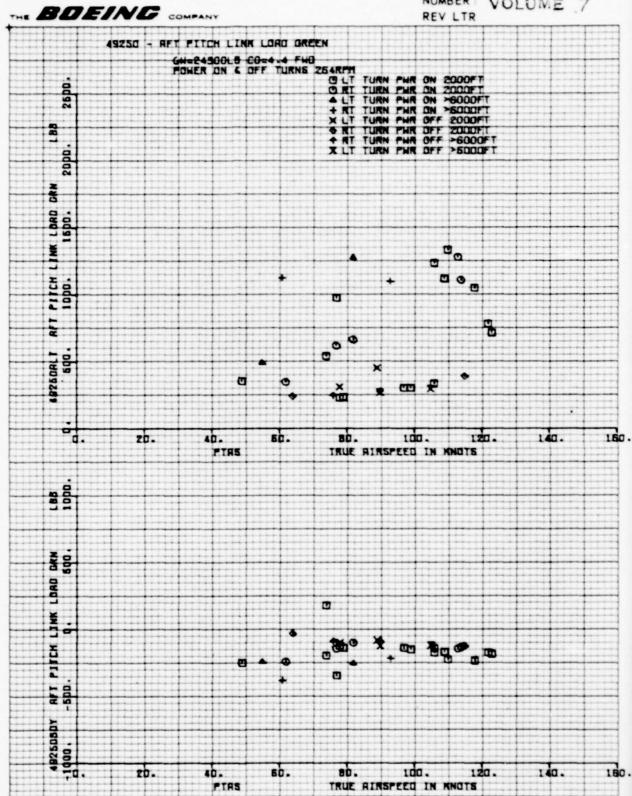






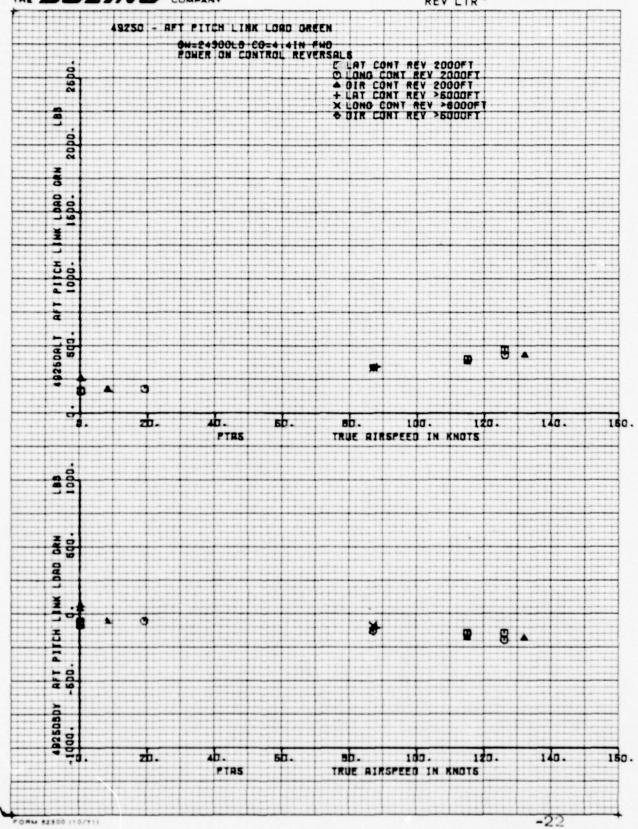


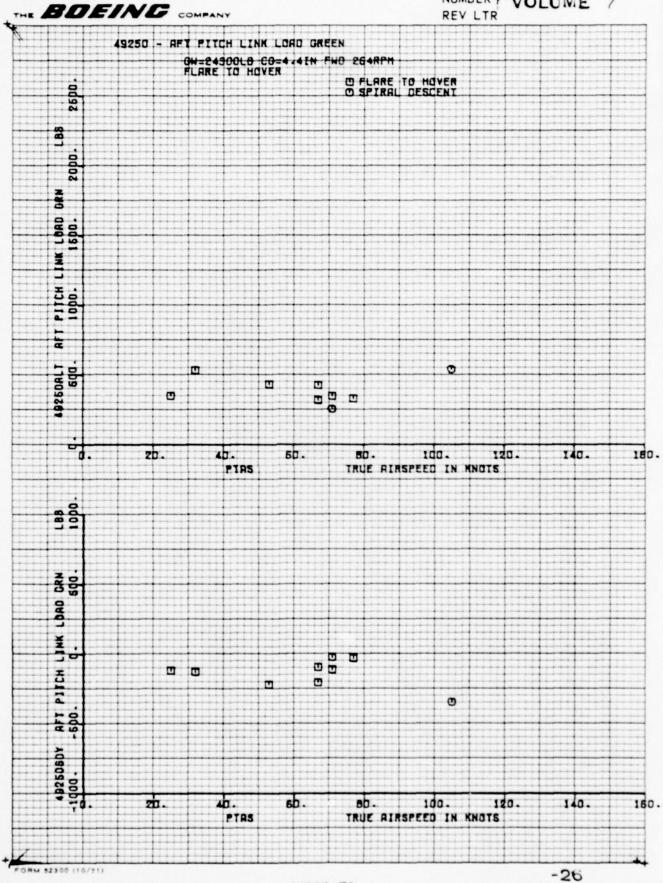
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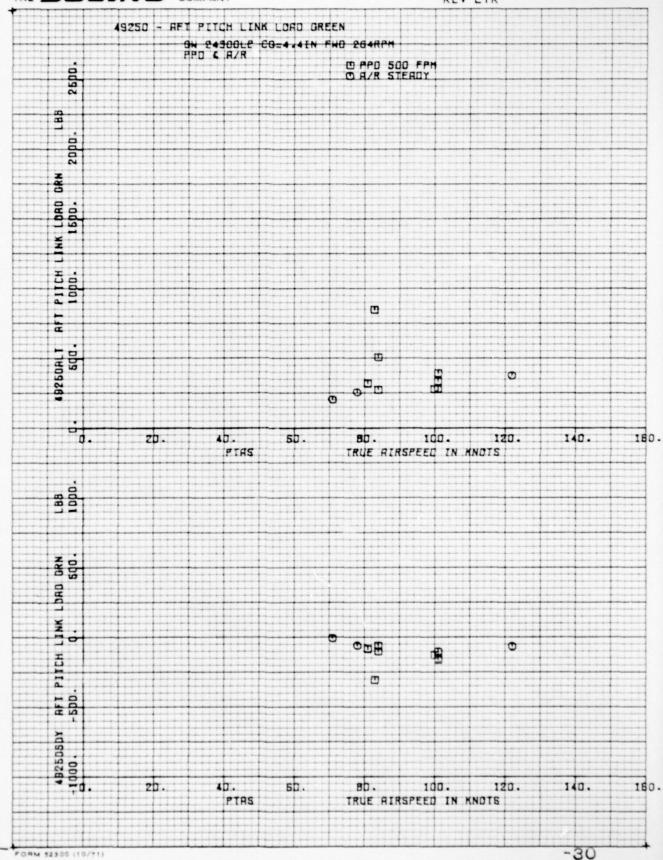


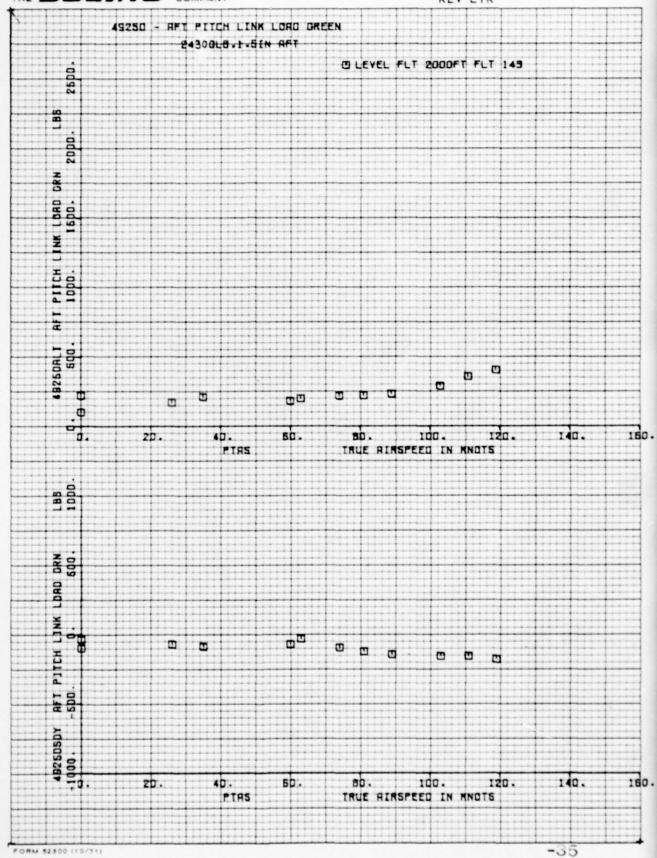
ORM 52300 (10/71)











PREPARED BY: J. Bendo

THE BOEING COMPANY DATE:

8/28/78

NUMBER D210-11168-3 REV LTR Volume 7

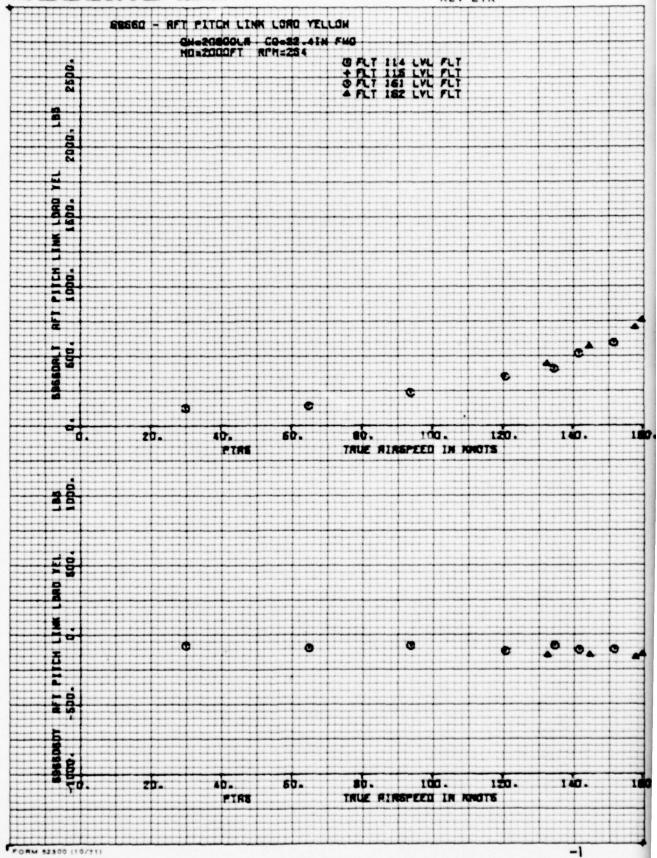
MODEL NO.

4.2 Aft Pitch Link, Yellow Blade

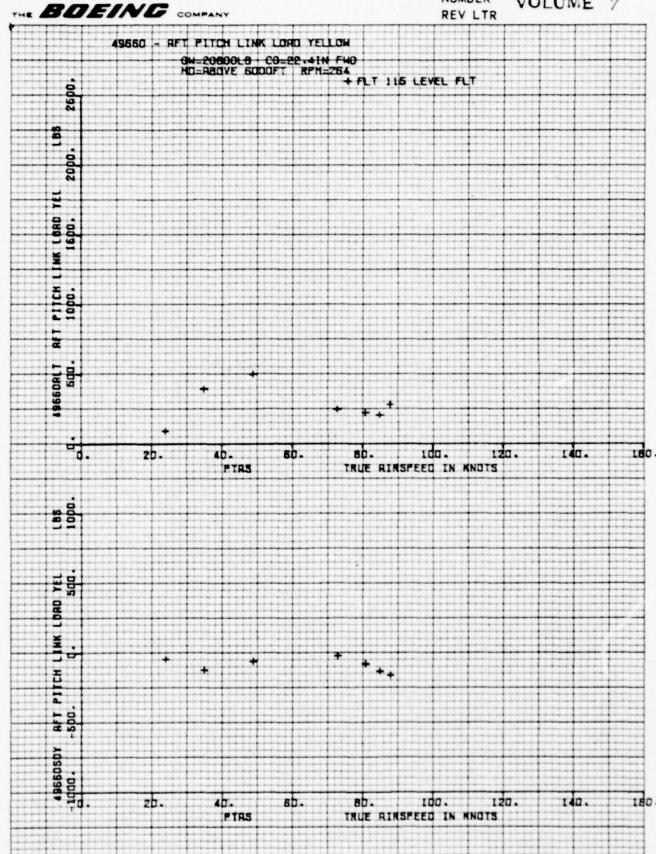
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THE BOEING COMPANY

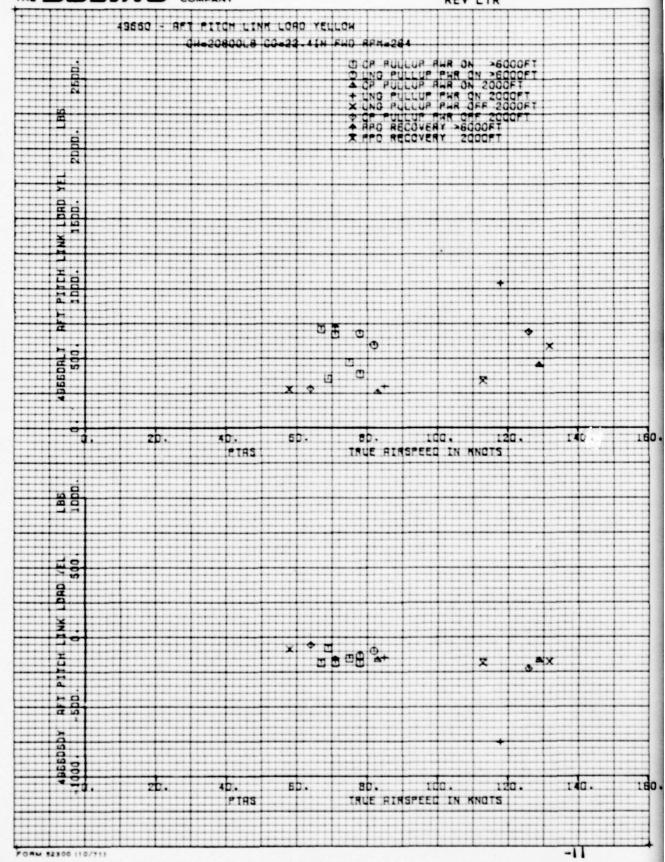
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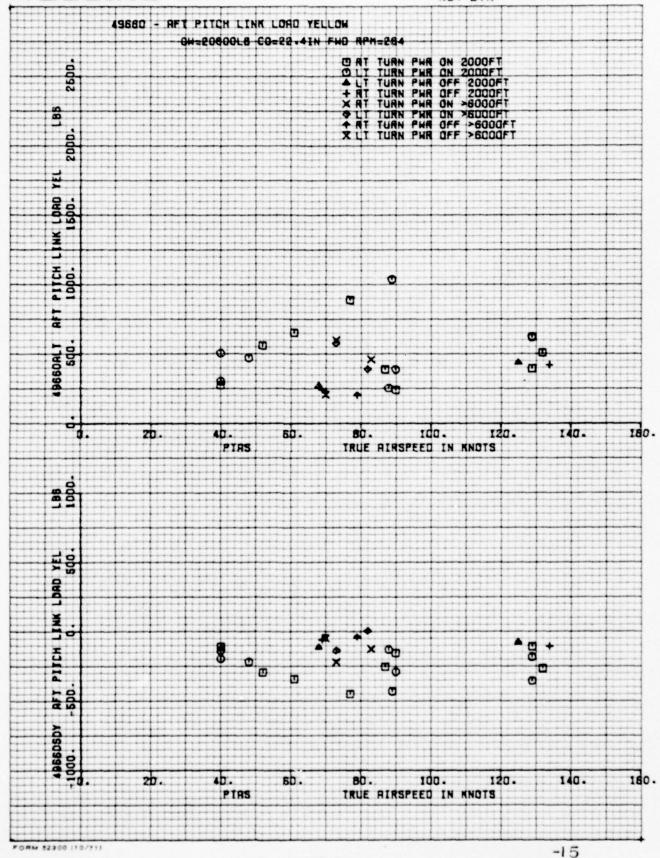
NUMBER REV LTR



FORM \$2500 (10/71)



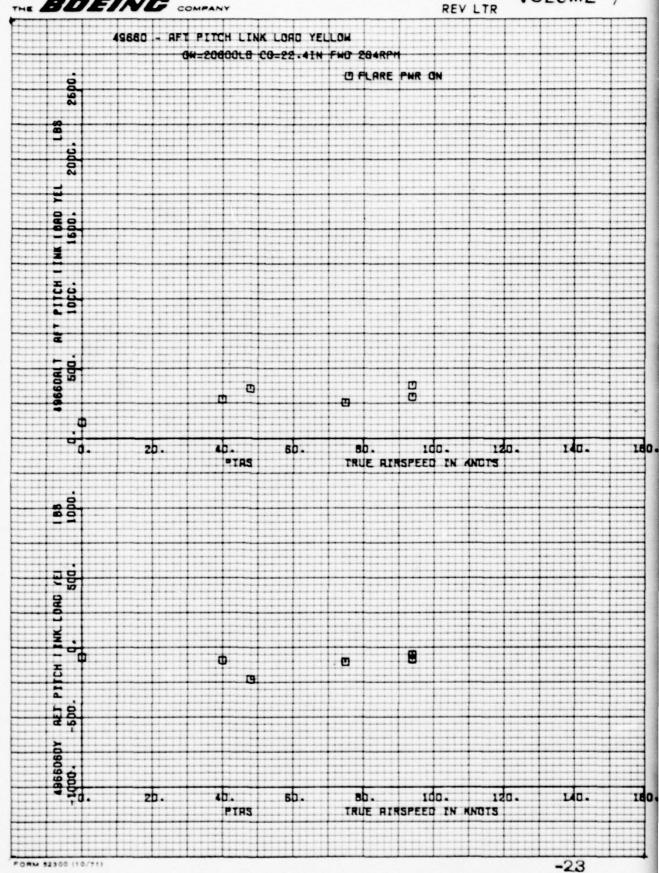
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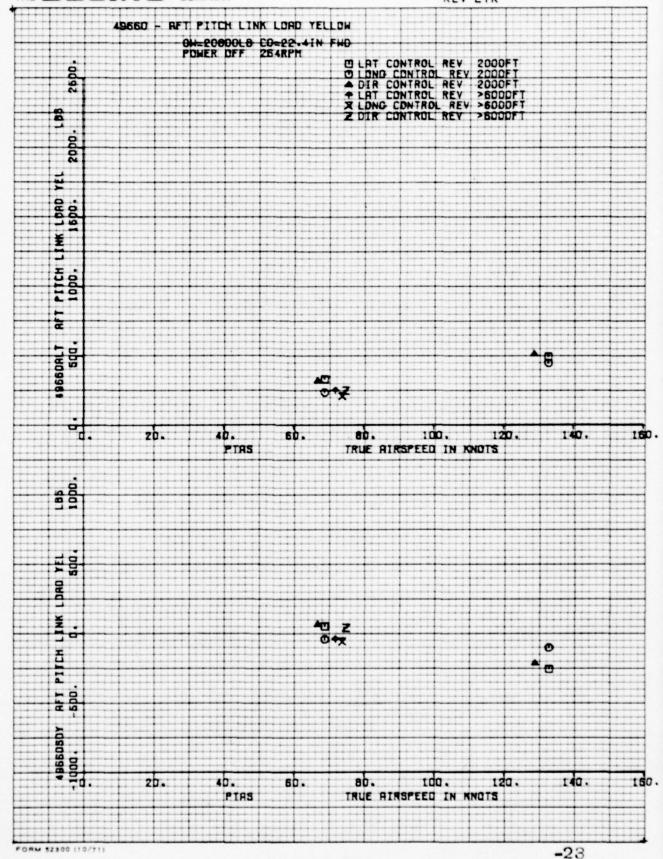
NUMBER

FORM \$2300 (10/71)

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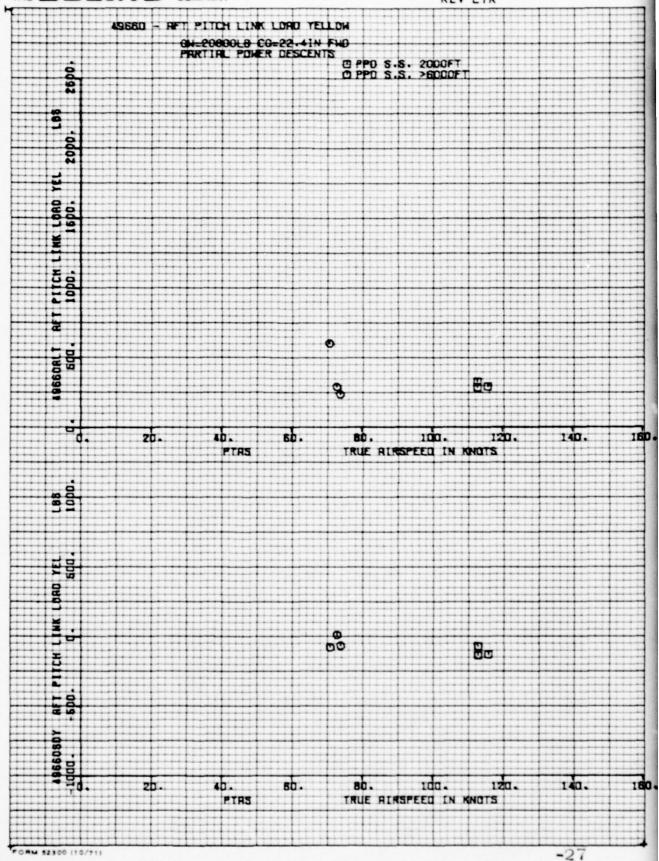


NUMBER VOLUME 7 REV LTR



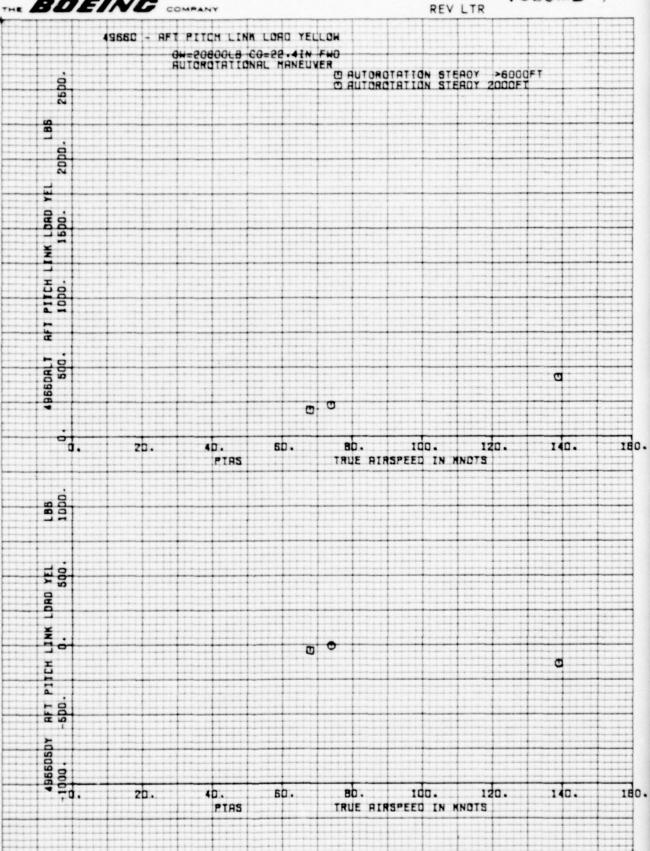
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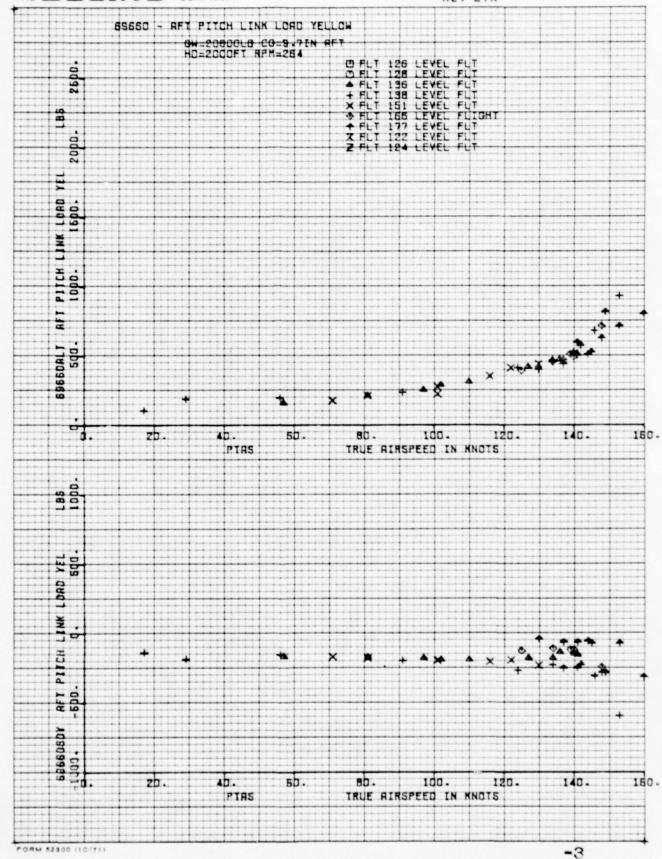




NUMBER

FORM \$2500 (10/71)





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TRUE AIRSPEED IN MNOTS

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THE BOEING COMPANY 49660 - AFT PITCH LINK LORD YELLOW 0N-20000L0 CO-9.7(N RFT HD-2000FT RPH-264 C FLT 126 LEVEL FLT
C FLT 126 LEVEL FLT
A FLT 136 LEVEL FLT
+ FLT 136 LEVEL FLT
X FLT 151 LEVEL FLT
FLT 155 LEVEL FLT
FLT 177 LEVEL FLT
X FLT 122 LEVEL FLT
Z FLT 124 LEVEL FLT 2600 1.85 P.17CH 1000. AFT 19660ALT Squ. 0 0 0 0 O O 140. IED. 100. AD. BD. TRUE RINSPEED IN KNOTS PTRS LORD YEL 690. 0 ž.

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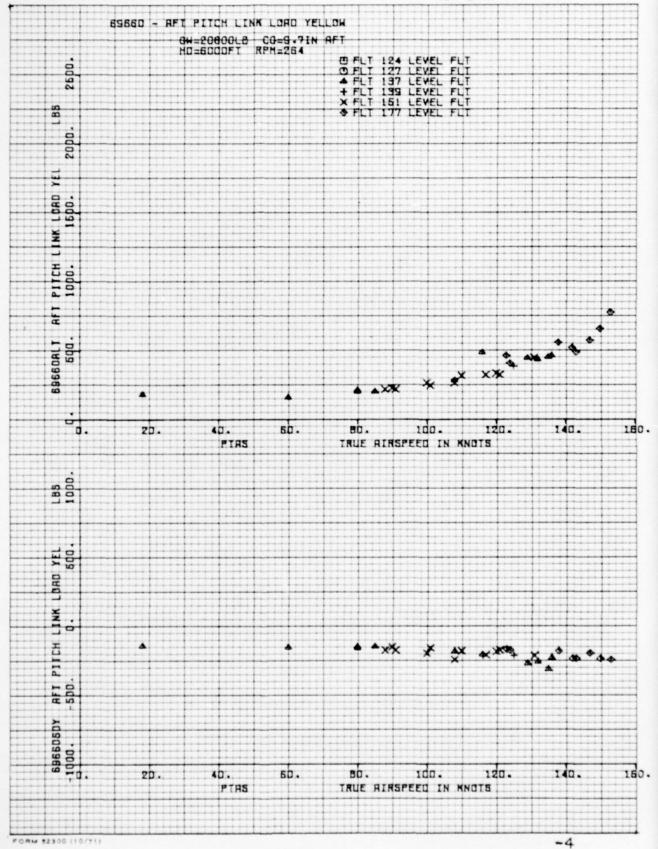
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PITCH

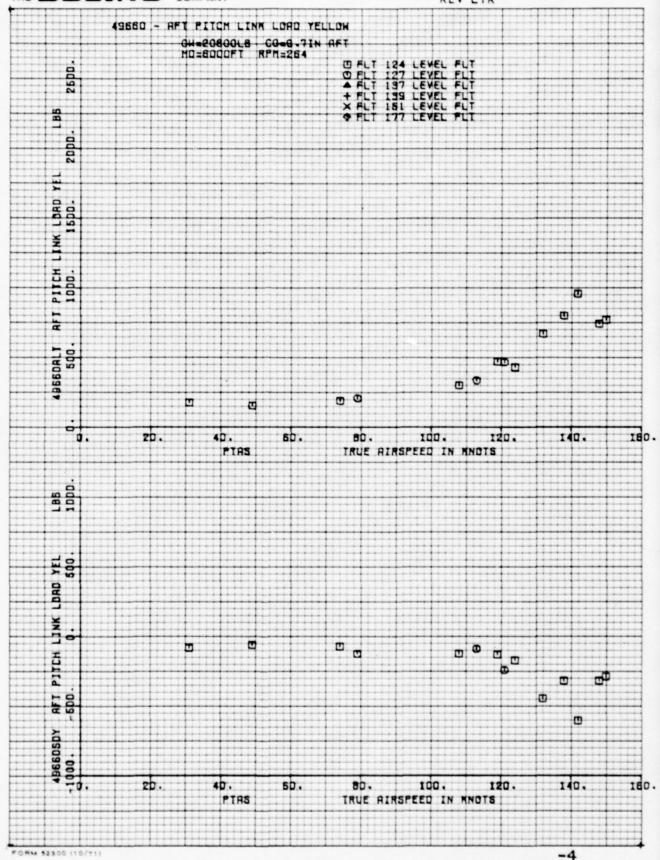
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FORM \$2300 (10/71)



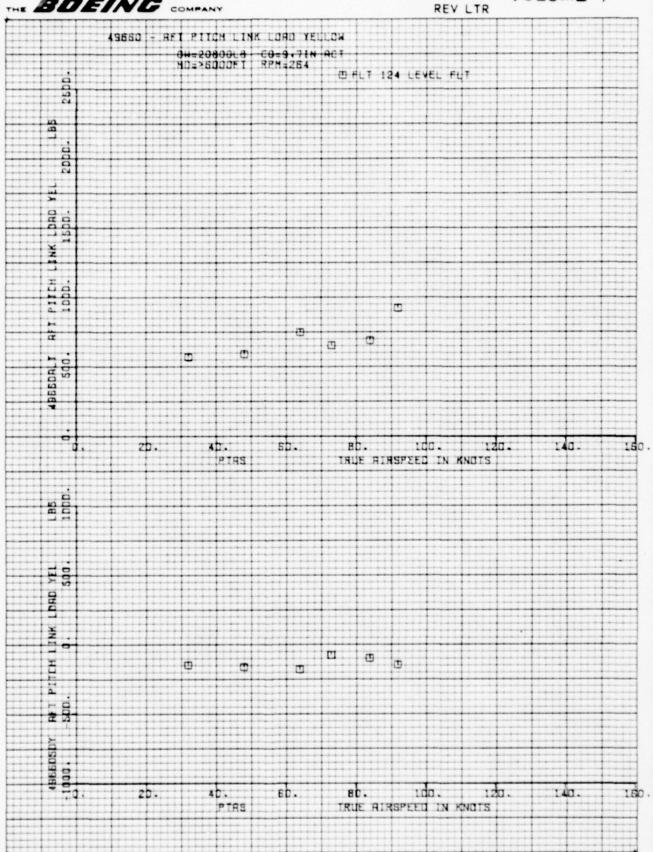
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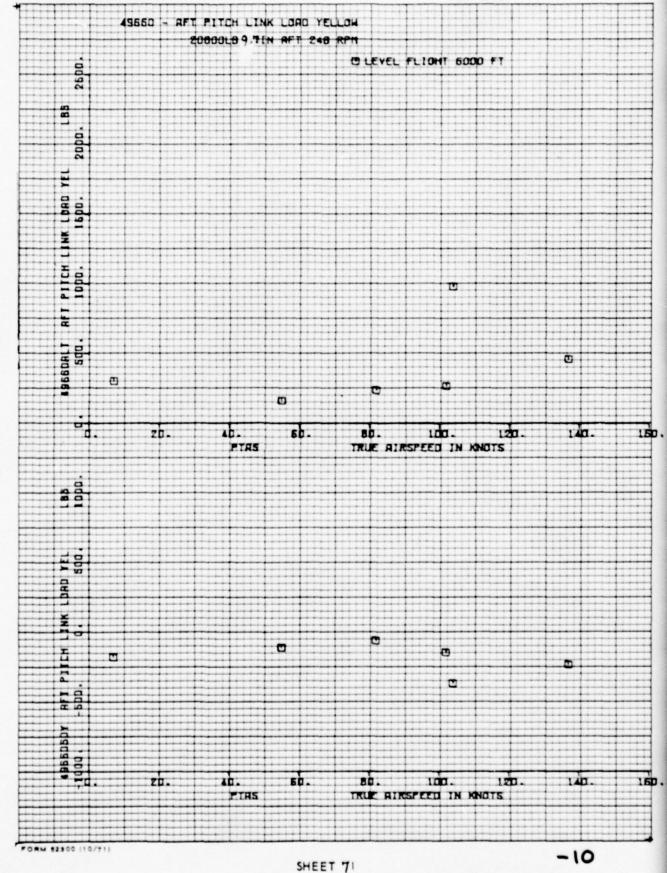
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FORM \$2300 (10/71)

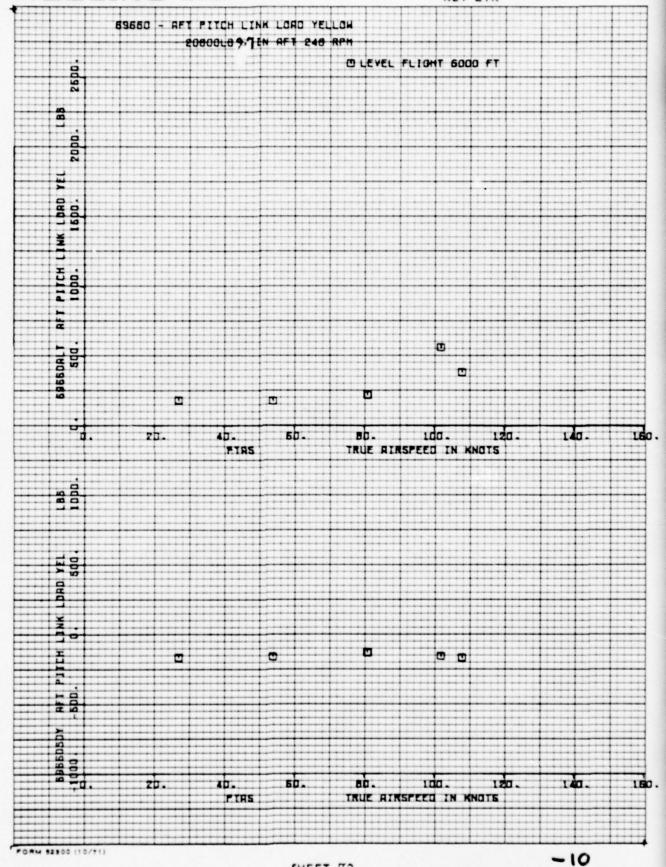


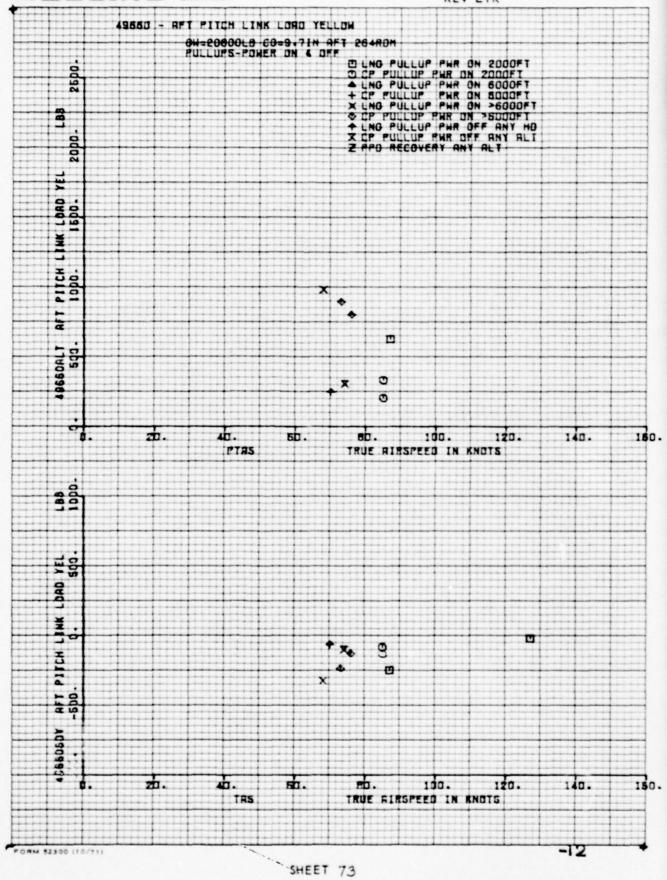
D210-11168-3 NUMBER VOLUME 7 REV LTR



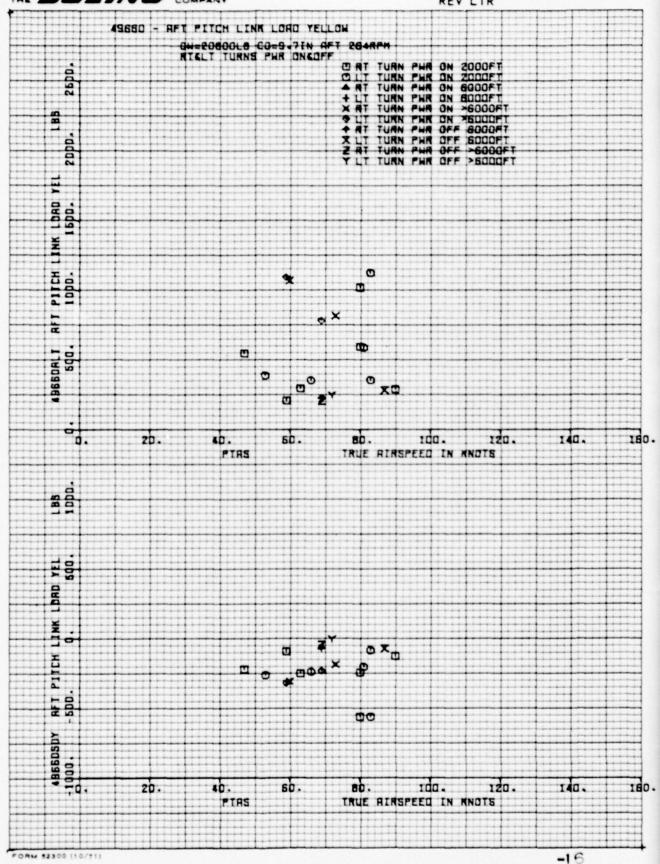
THE BOEING COMPANY

NUMBER REV LTR

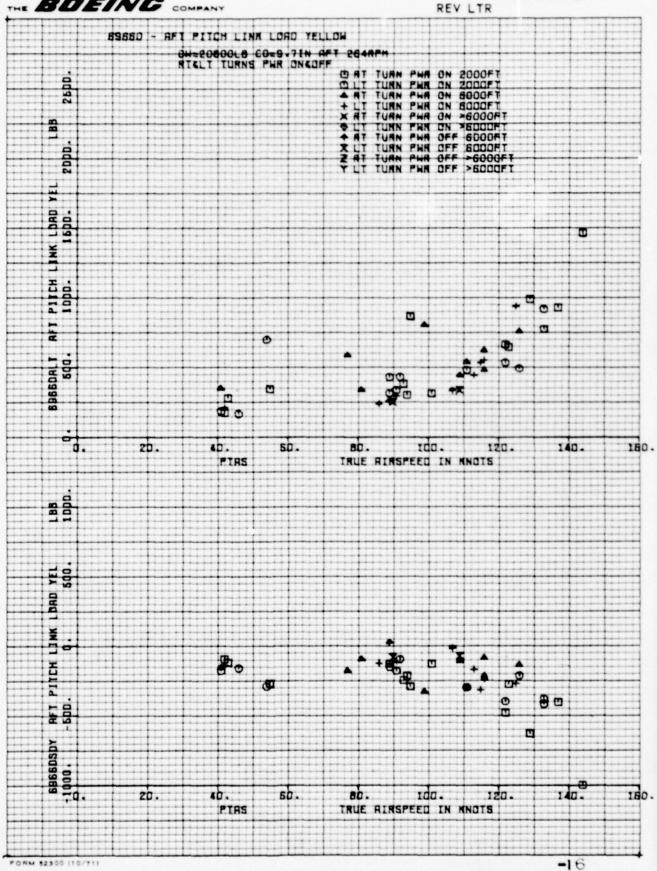




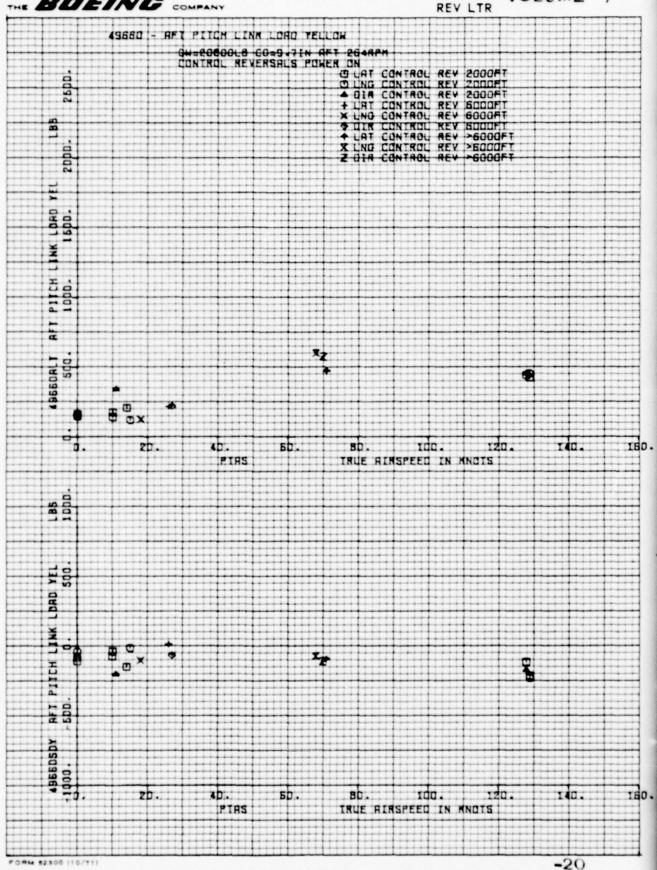
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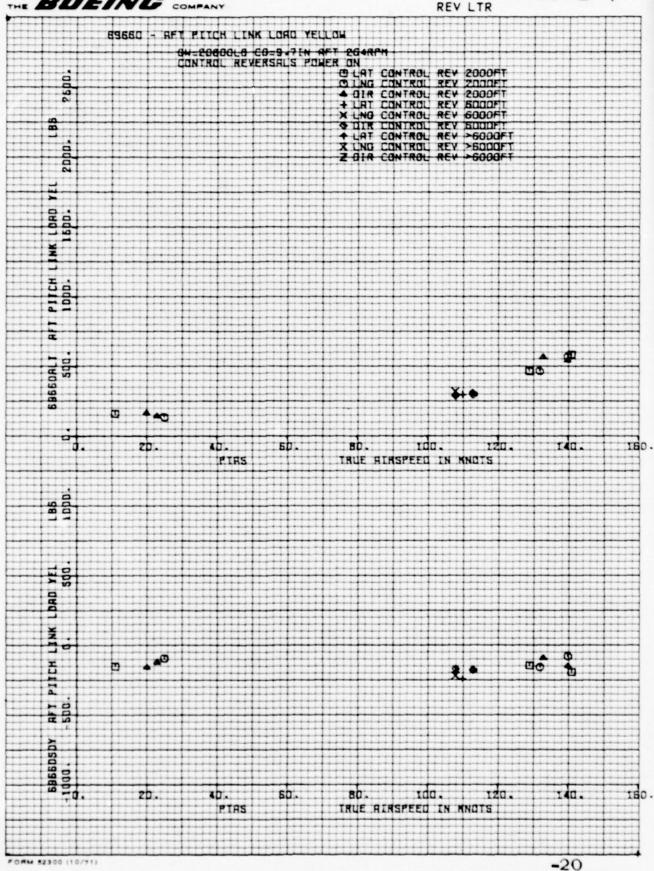
VOLUME 7 NUMBER



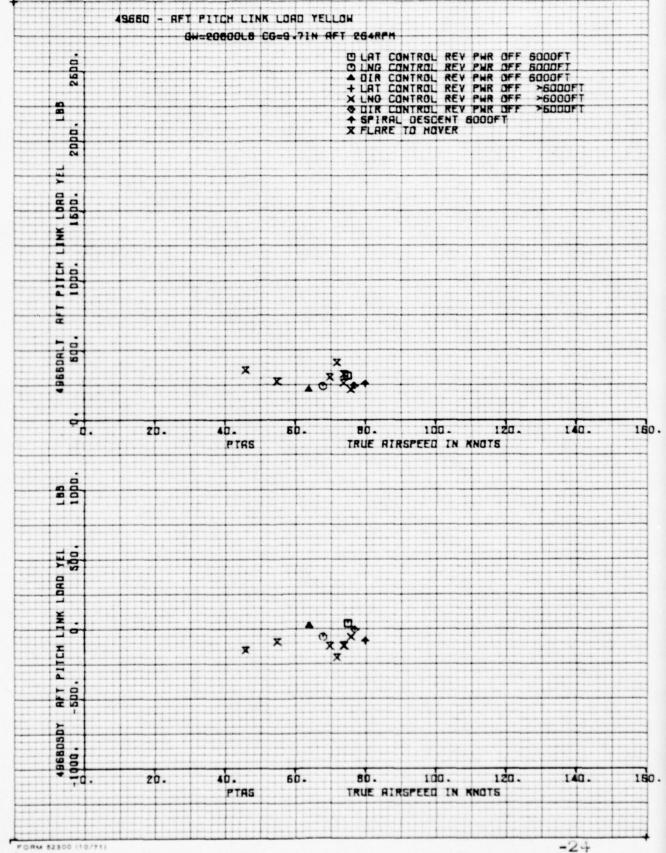
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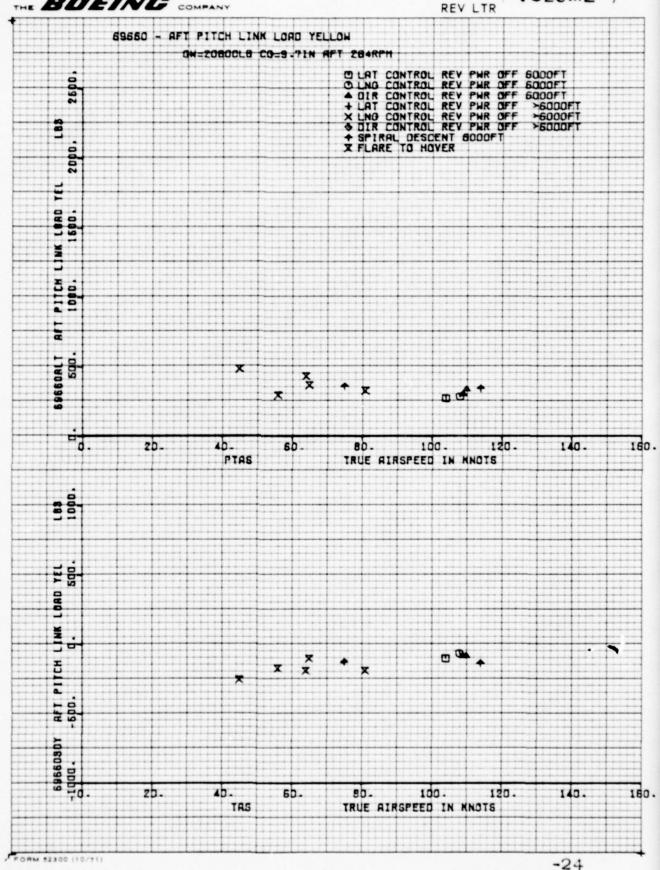


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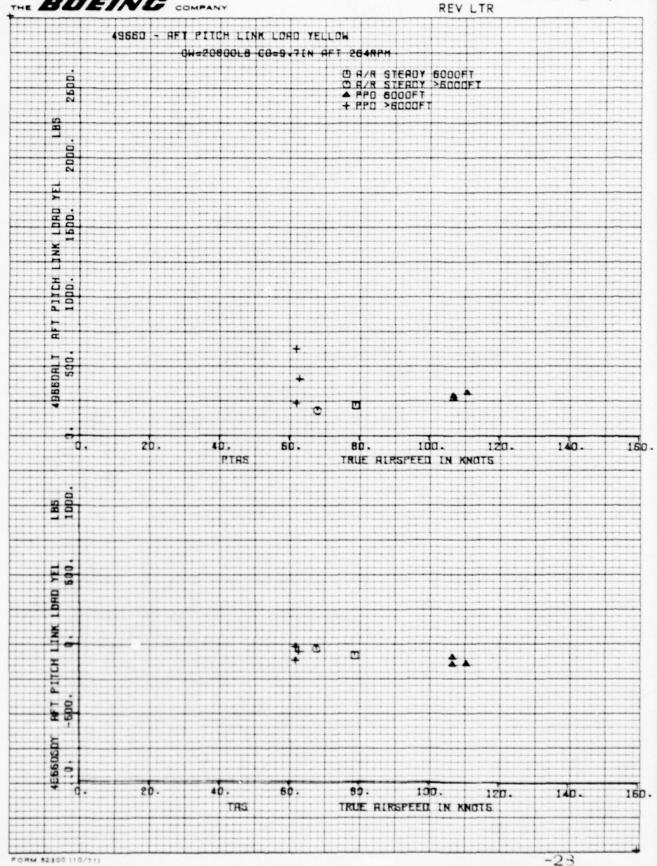


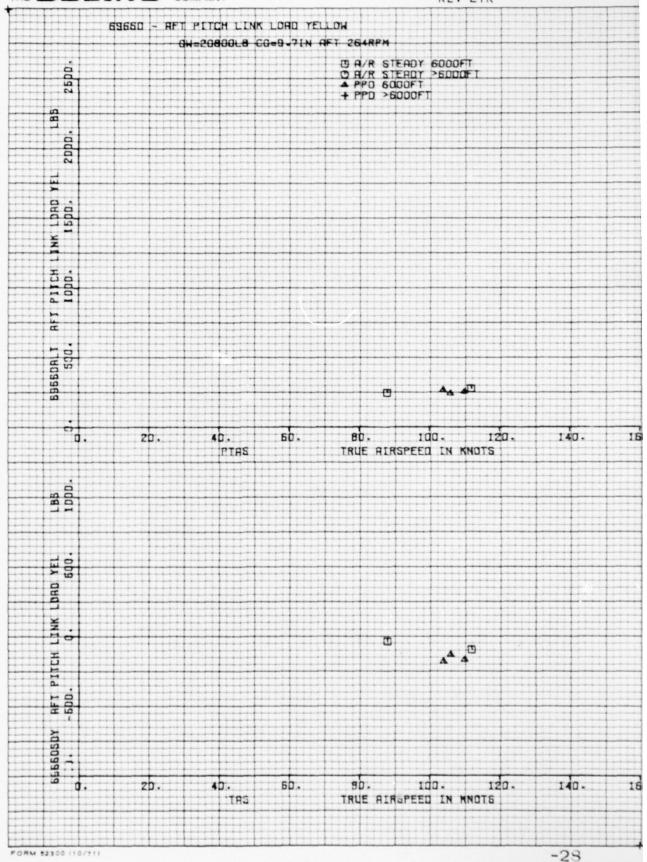
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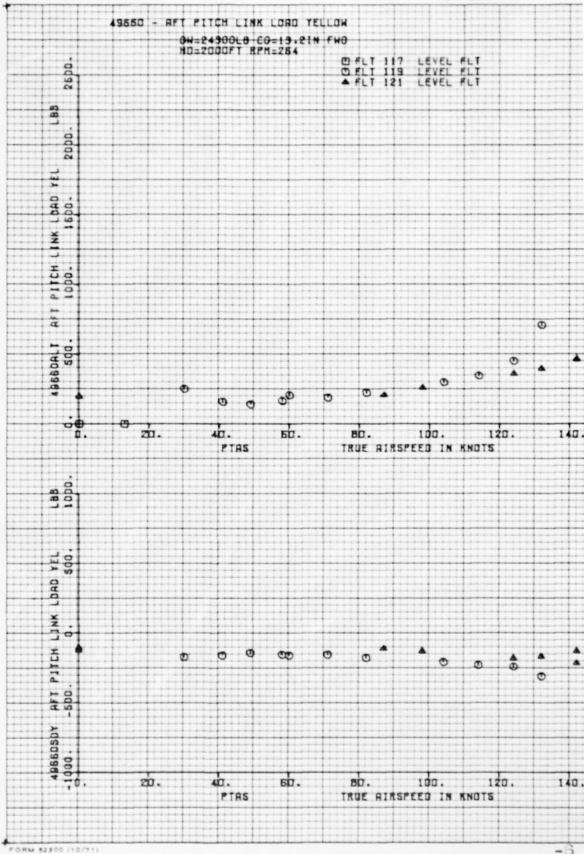




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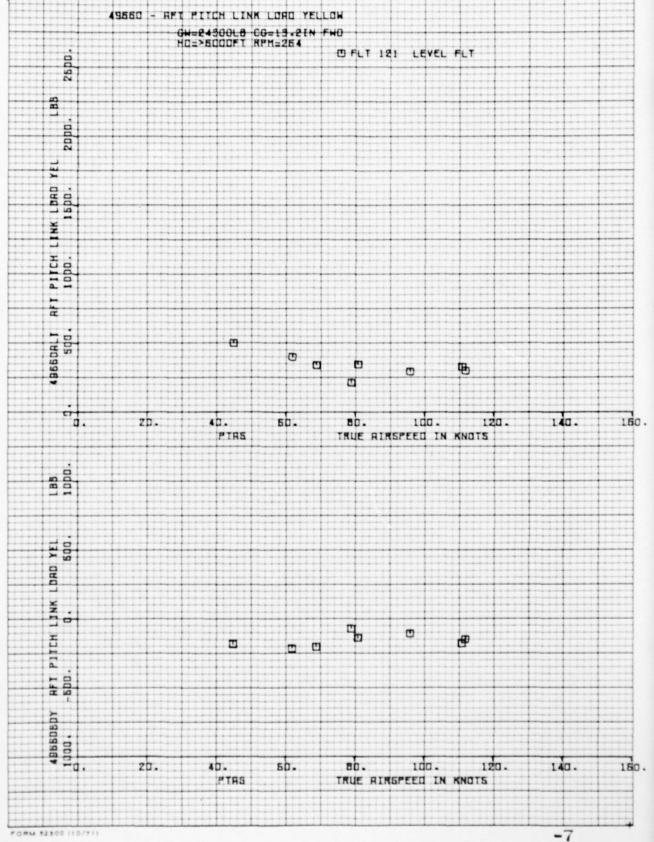


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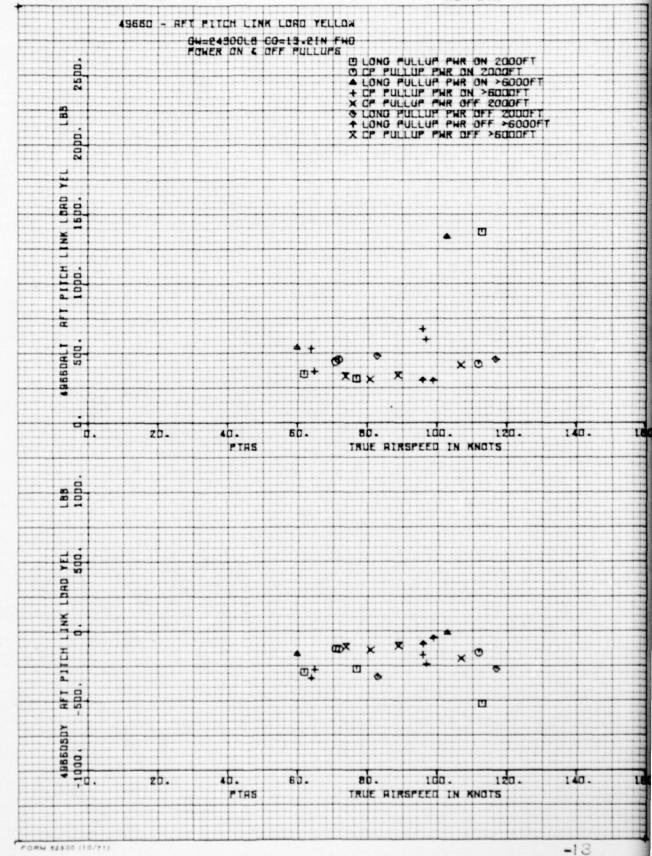
THE BOEING COMPANY

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REV LTR



NUMBER REV LTR



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VOLUME NUMBER

THE BOEING COMPANY REV LTR 49660 - AFT PITCH LINK LOAD YELLOW OH-24300LB GO-13.21N FHO TURNS POWER ON ADFF 264RPH THE TURN PHE ON 2000FT 2500. ART TURN PHR ON >6000FT
+ LT TURN PHR ON >6000FT
X LT TURN PHR OF 2000FT
ORT TURN PHR OFF 2000FT
+ LT TURN PHR OFF >6000FT
+ LT TURN PHR OFF >6000FT
X RT TURN PHR OFF >6000FT 185 2000 LINK LORD YEL 1500. PITCH 1000 0 AFT 0 B 0 0 D ABBEDALT SQG. BO × A COD ٦. 140. 150. AD. Ido. 120. zb. 50. BD. TRUE RIRSPEED IN MNDTS PIRS 1000 LDAD YEL SOO. ž. OCT X PITCH E 0 0 4B6E0SDY -1000

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TRUE HIRSPEED IN MNOTS

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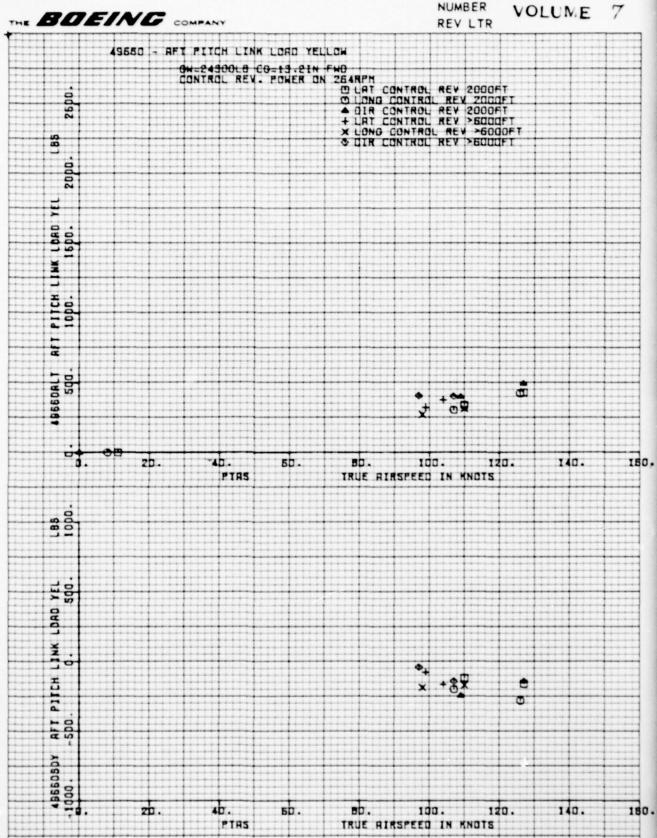
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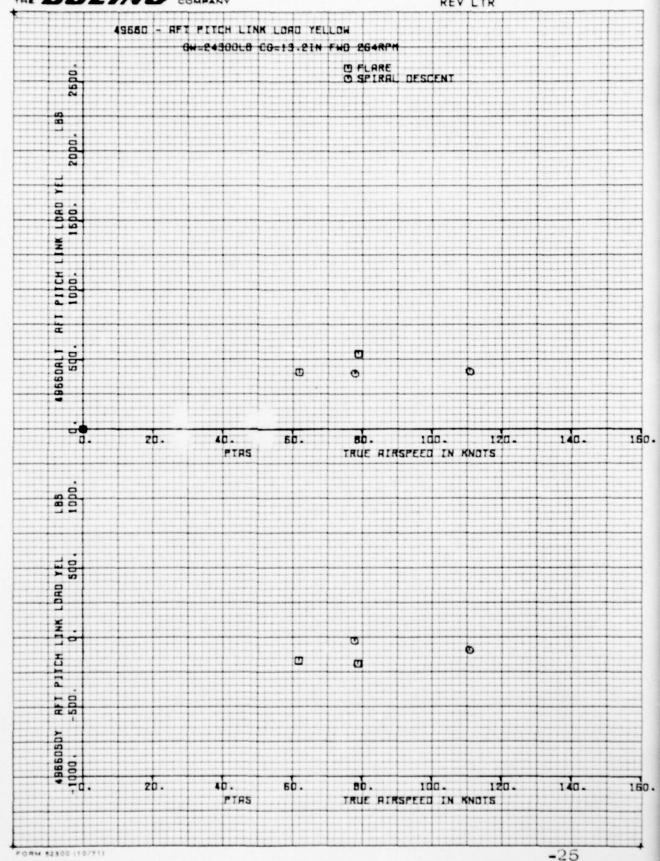
FORM \$2300 (10/71)

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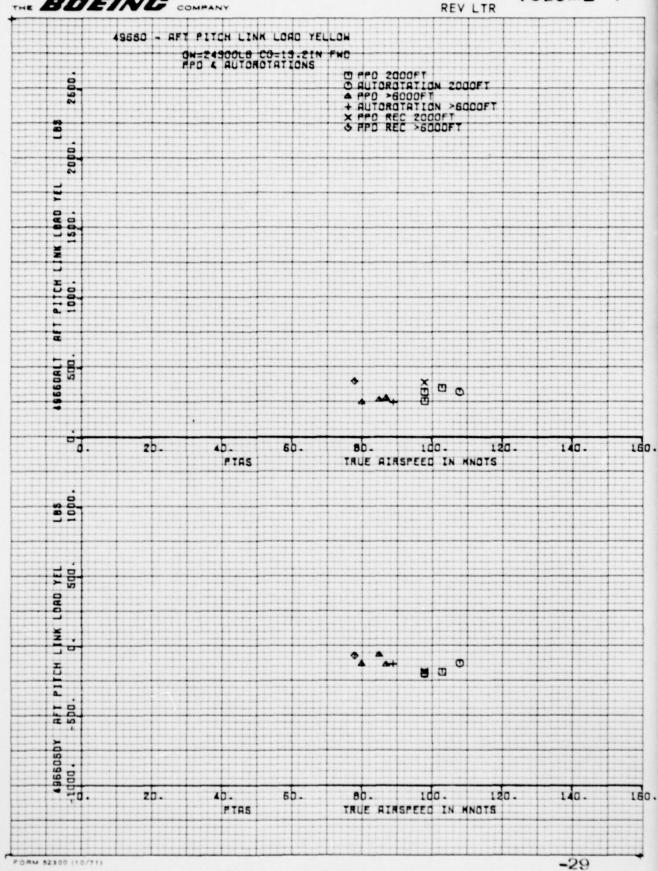
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NUMBER



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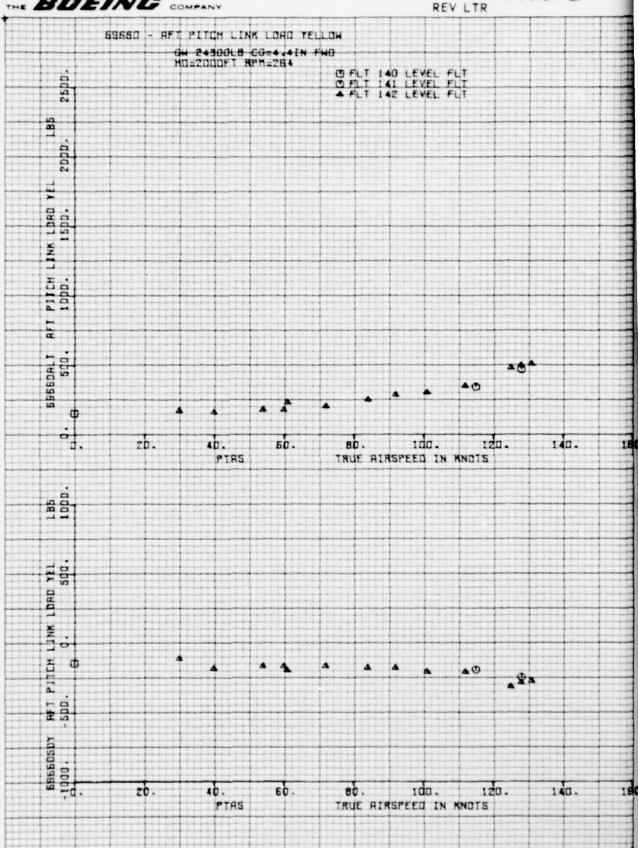
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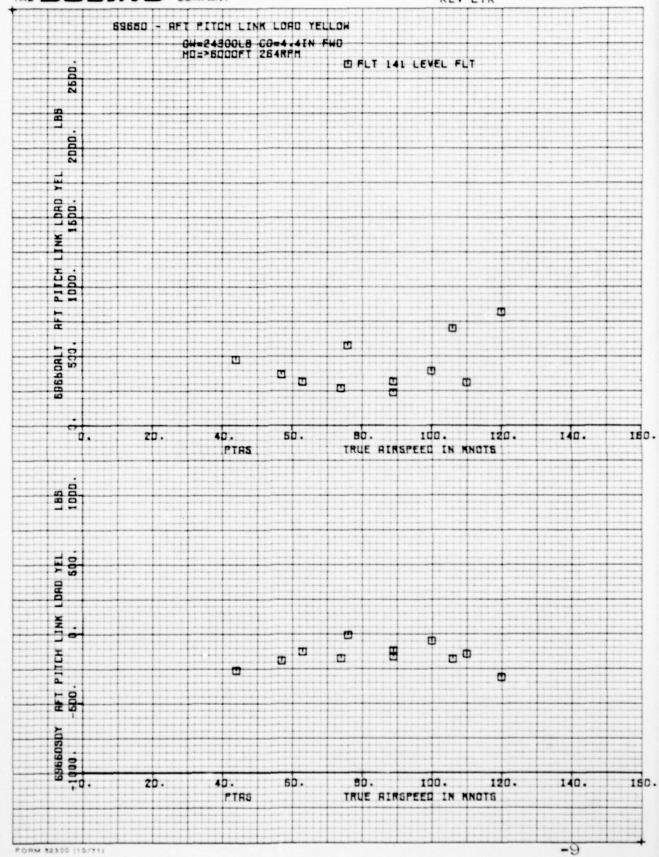
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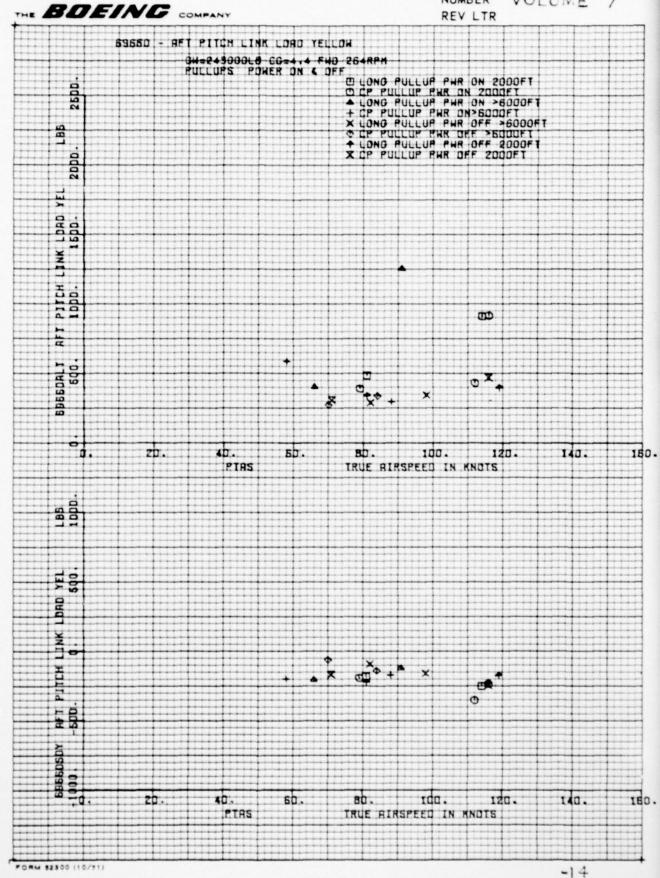
FORM \$2500 (10/71)



NUMBER | VOLUME 7



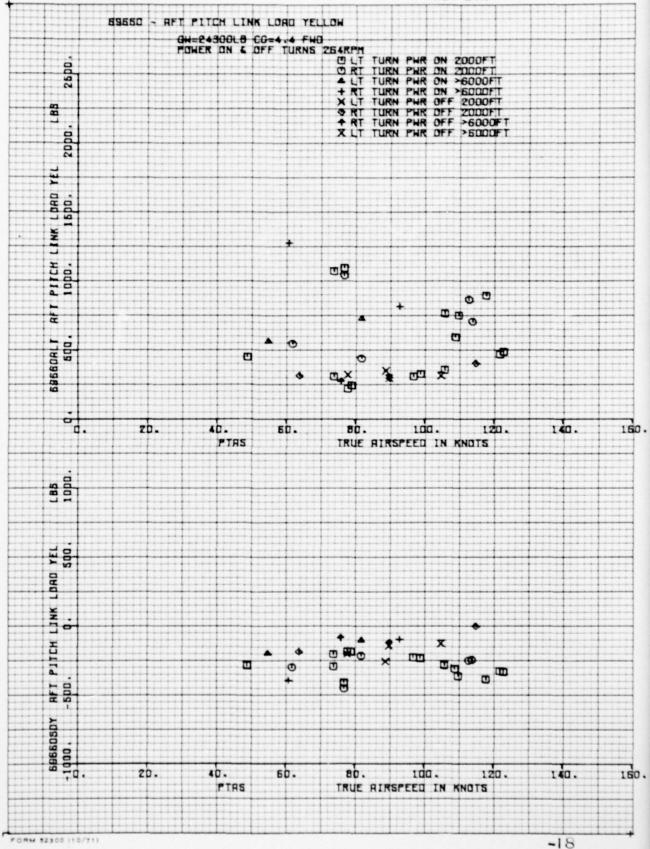
VOLUME 7 NUMBER REV LTR



NUMBER VOLUME 7

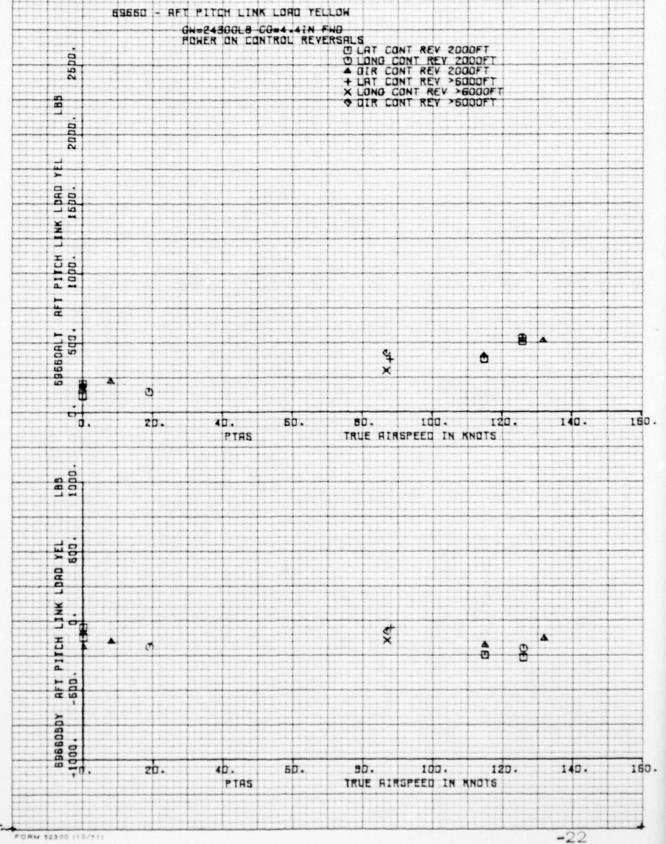
THE BOEING COMPANY

3



NUMBER ! VOLUME 7 REV LTR

THE BOEING COMPANY 69660 - AFT PITCH LINK LORD YELLOW



NUMBER THE BOEING COMPANY REV LTR 89660 - AFT PITCH LINK LORD YELLOW SH=24900LB CO=4.4IN FHO 264RPM E FLARE TO HOVER 2600 2000 LINK LORO . P.17CH 10001 BFT 68660ALT 590. • 0 D ZD. AD. 50. 5D. 100. 140. 150 . PTAS TRUE RIRSPEED IN KNOTS 1000 LINK LOAD YEL 0 PITCH 

5D.

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100. TRUE AIRSPEED IN KNOTS 140.

-26

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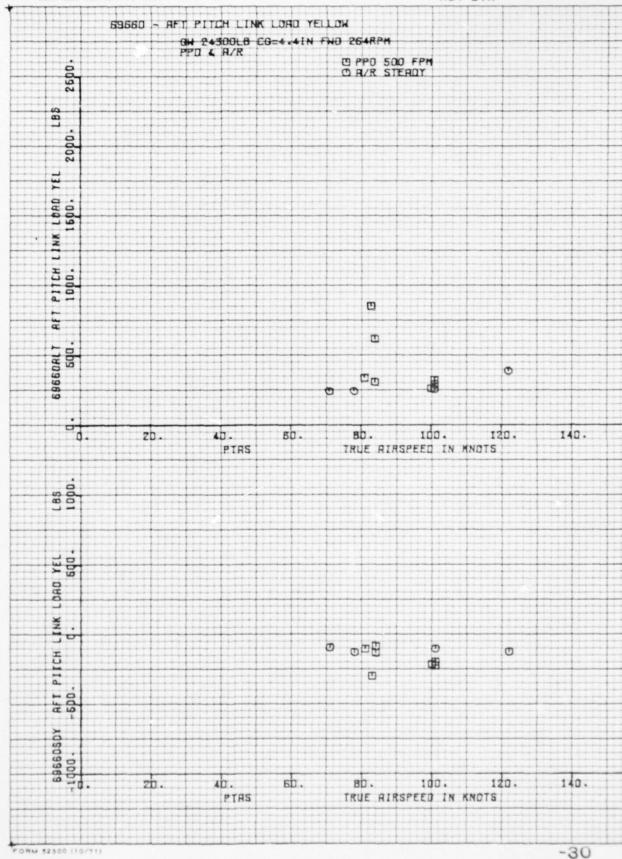
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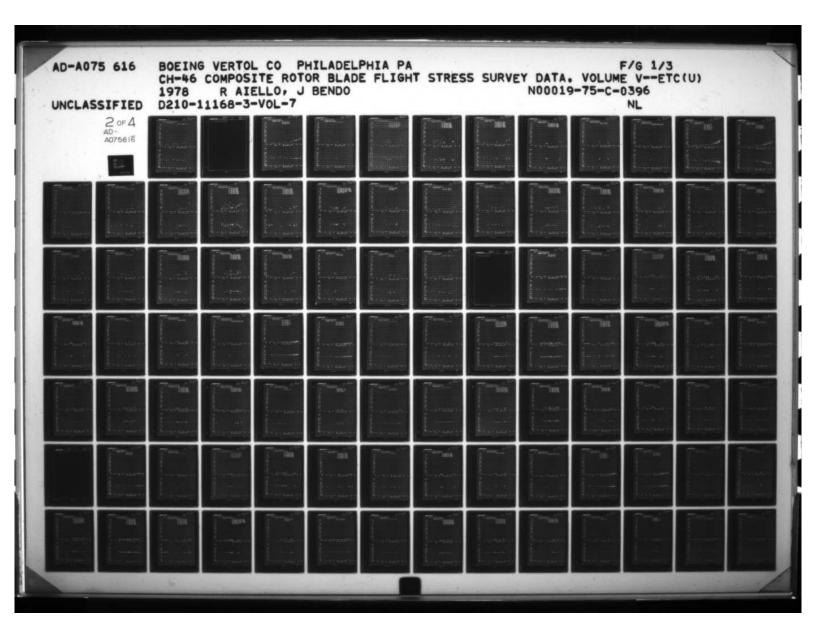
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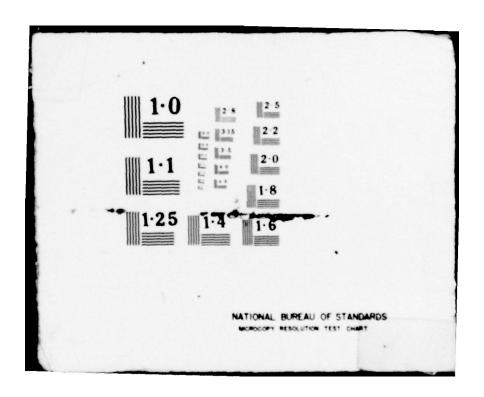
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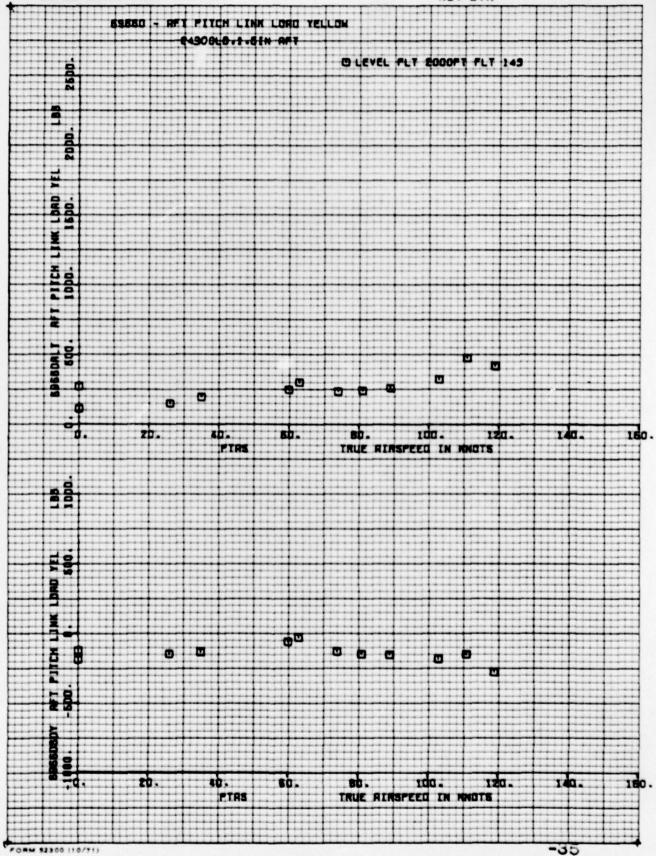
FORM \$2300 (10/71)

NUMBER VOLUME 7









PREPARED BY: CHECKED BY:

J. Bendo

NUMBER I REV LTR MODEL NO. D210-11168-3 Volume 7

THE BOEING COMPANY DATE:

8/28/78

4.3 Aft Pitch Link, Red Blade

D210-11168-3

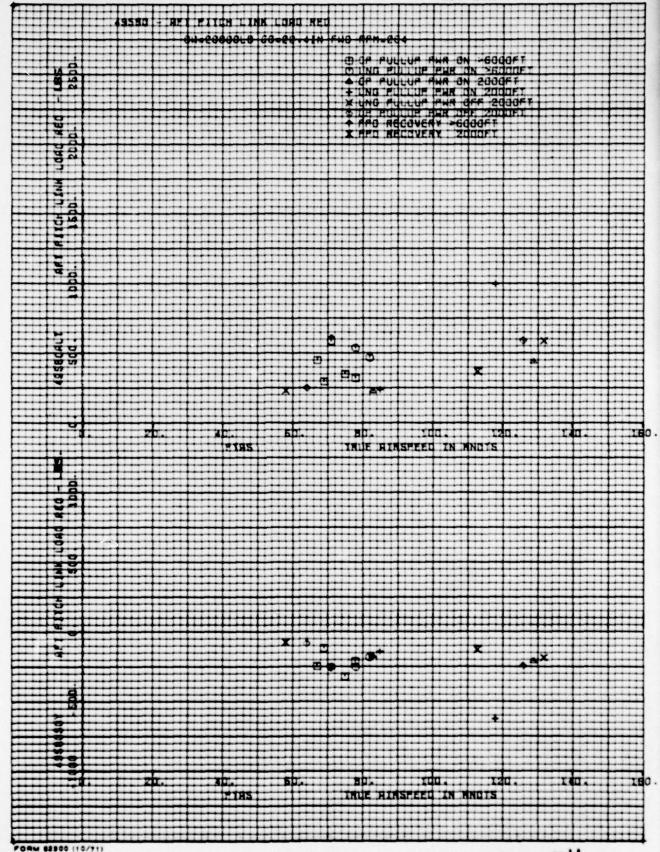
SHEET 98

THE BOEING COMPANY

REV LTR 9580 - PET PITCH LINK LORD RED T PITCH LIME SOME PAIN FAID SHE 20000LO CO-22 HIN FAID HO-980VE SOUDFT RPH-254 + FLT 115 LEVEL FLT + ab. 80. 100. 120. TRUE RERSPEED IN KNOTS FTAS BD. 100. 120. 140. TRUE RIRSPEED IN MNOTS FTRS

D210-11168-3 VOLUME 7

THE BOEING COMPANY REV LTR



TRUE AIRSPEED IN MNOTS

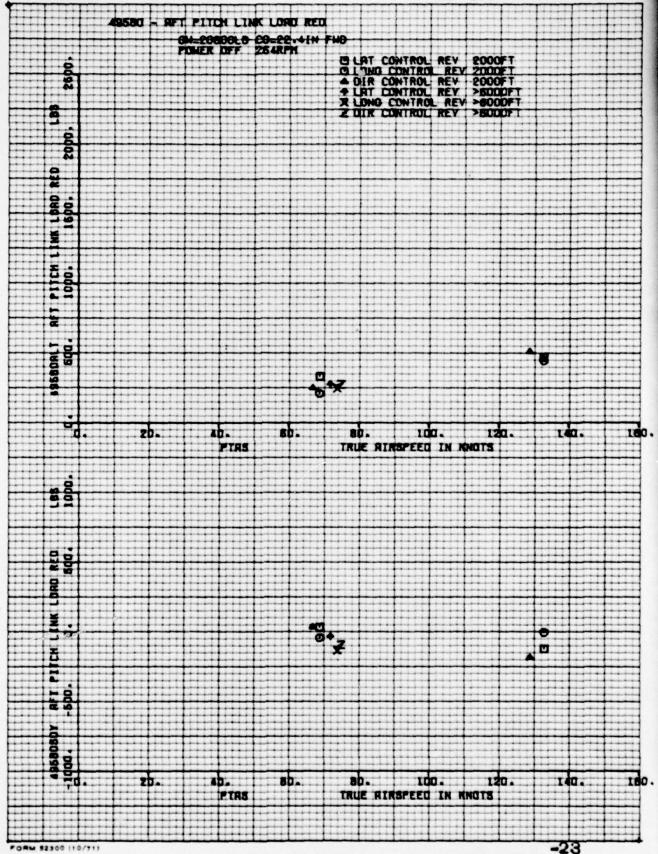
-15

sb.

FORM \$2300 (10/71)

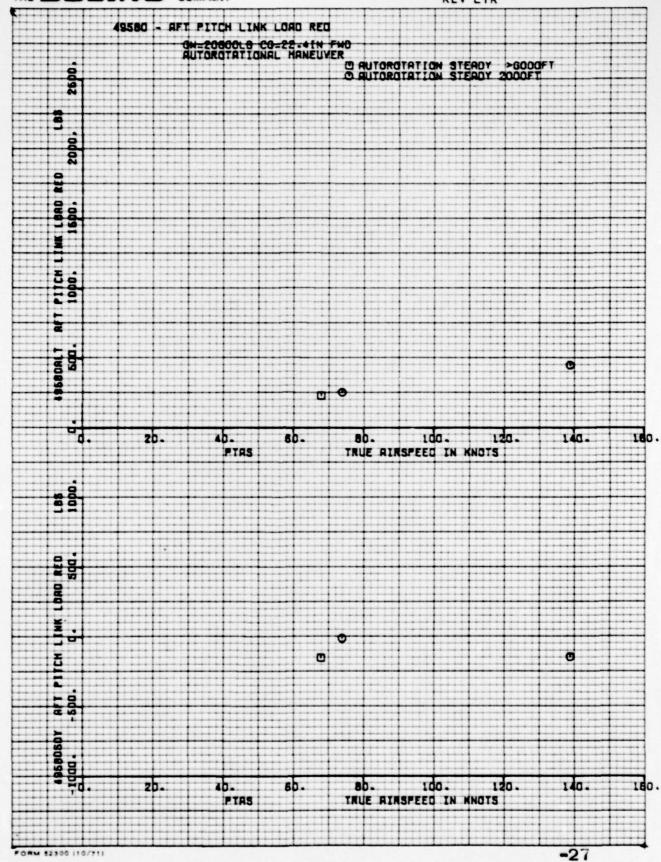
PIRS

D210-11168-3

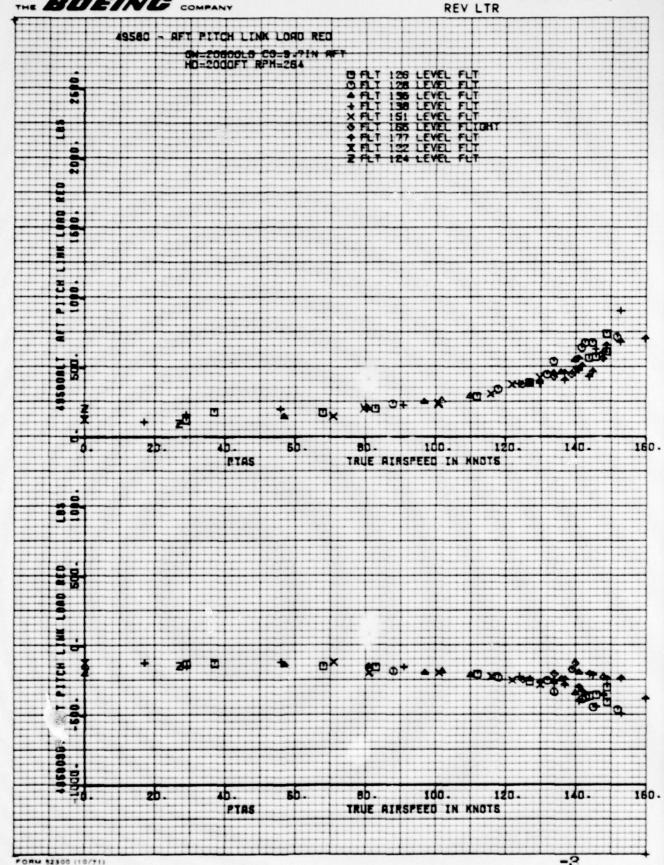


D210-11168-3 NUMBER THE BOEING COMPANY VOLUME REV LTR - AFT PITCH LINK LONG RED PARTIAL POWER DESCENTS @ PPO S.S. 2000FT 2500 Bo 20. AD. 60. 140. 80. 100. 120. FTRS TRUE RIRSPEED IN MINOTS Bo 20. AD. ido. 180. TRUE RIRSPEED IN MNOTS PTAS FORM \$2500 (10/71) -27

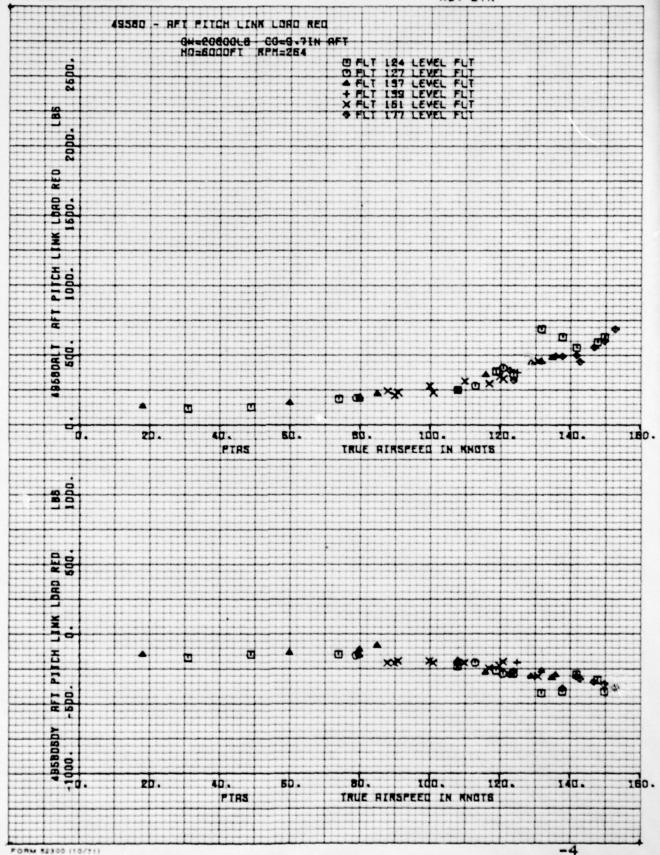
SHEET 104



NUMBER! VOLUME 7



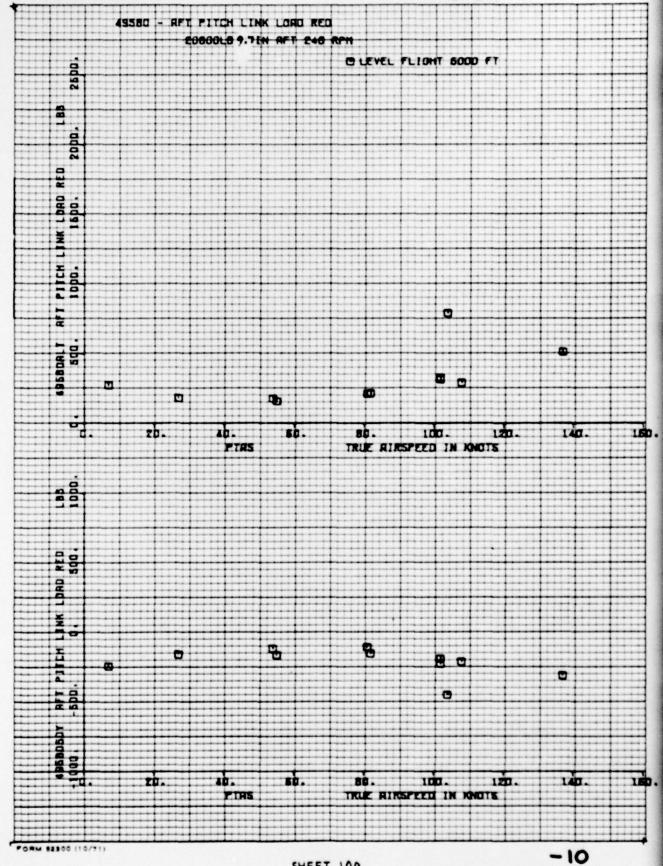
NUMBER REV LTR

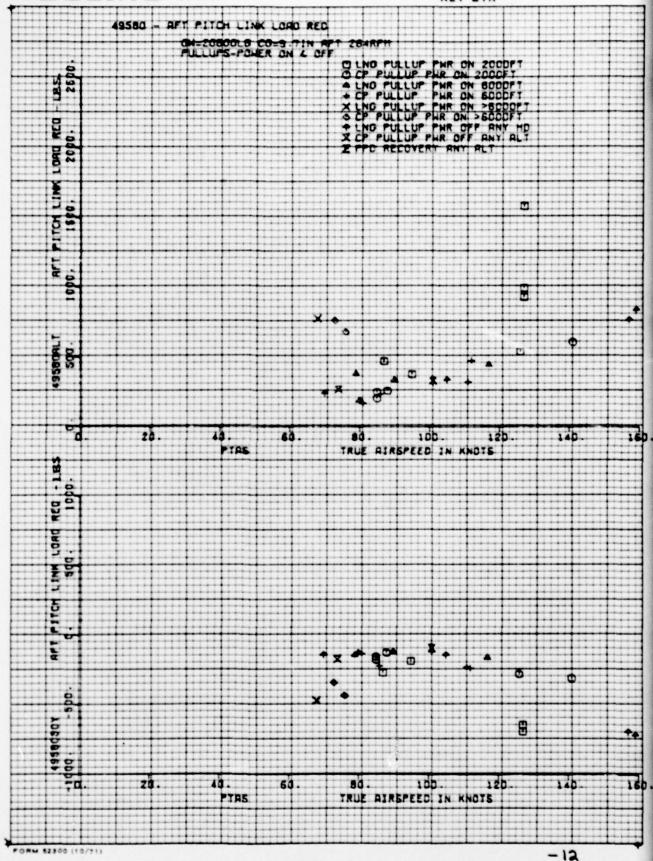


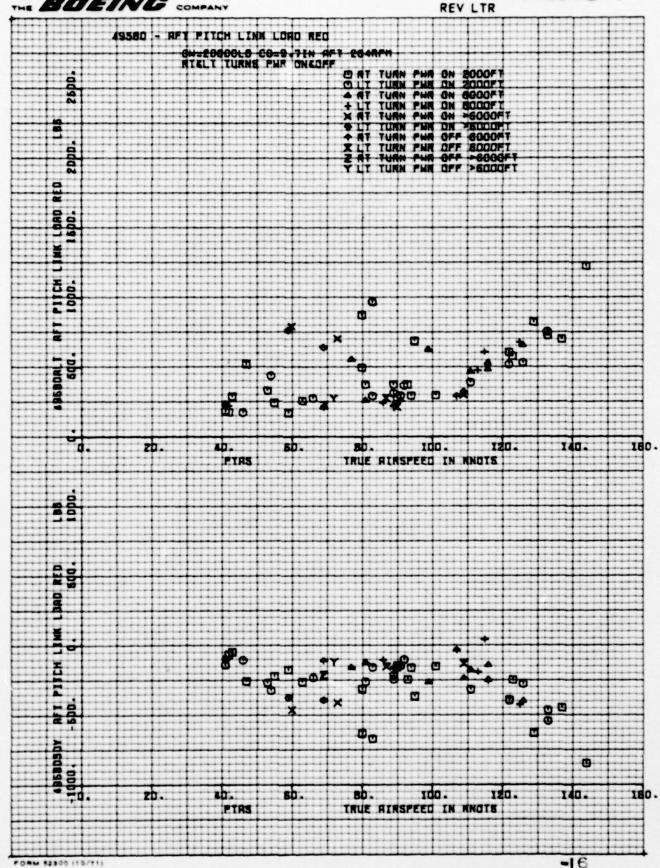
FORM \$2300 (10/71)

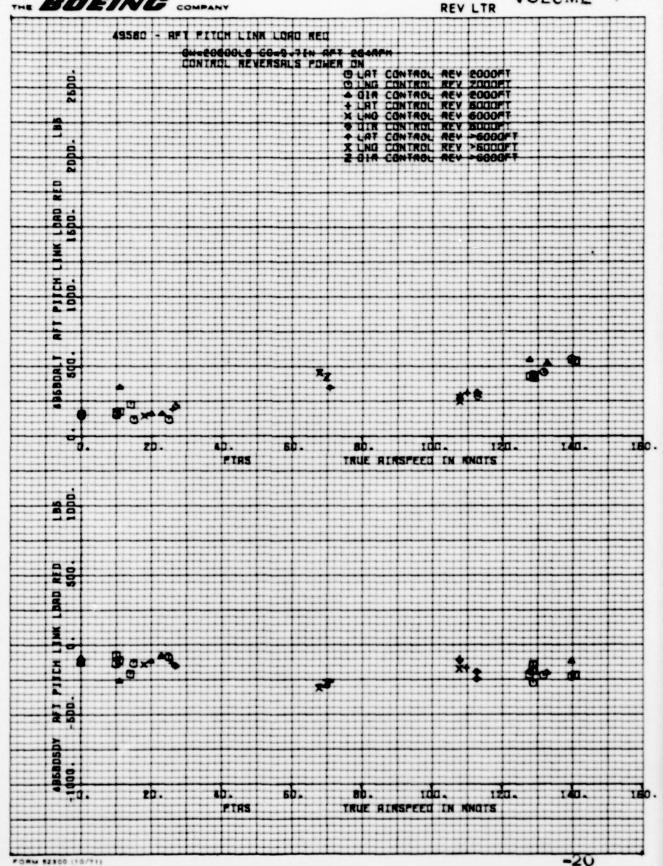
NUMBER REV LTR 49580 - RET BITCH LINK LOAD RED BHLT 124 LEVEL FUT 2600. 1000- 1600-TRUE RIRSPEED IN MNOTS 0 80. | Ida. TRUE AIRSPEED IN KNOTS PIAS

D210-11168-3 VOLUME 7 NUMBER REV LTR

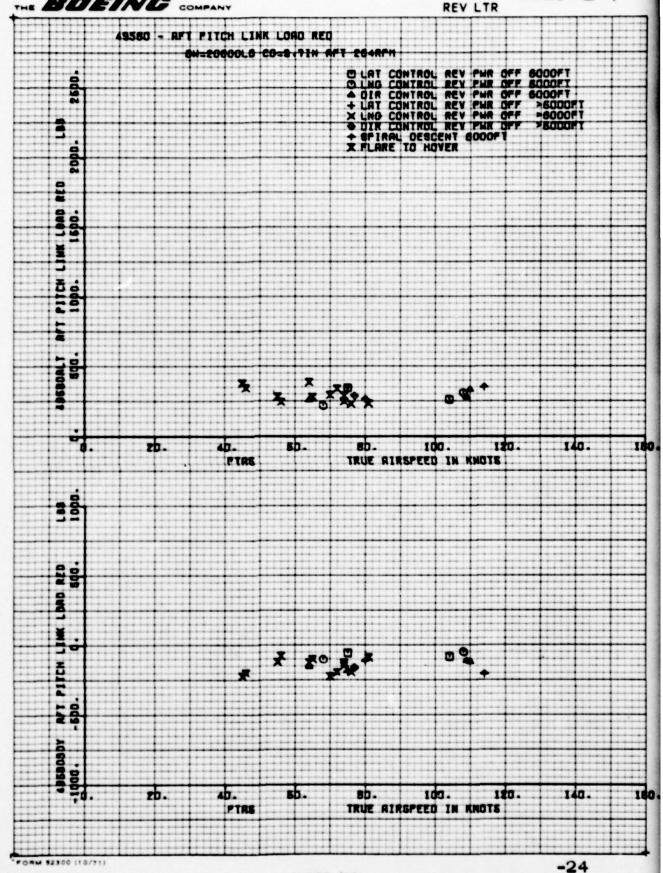








NUMBER



0

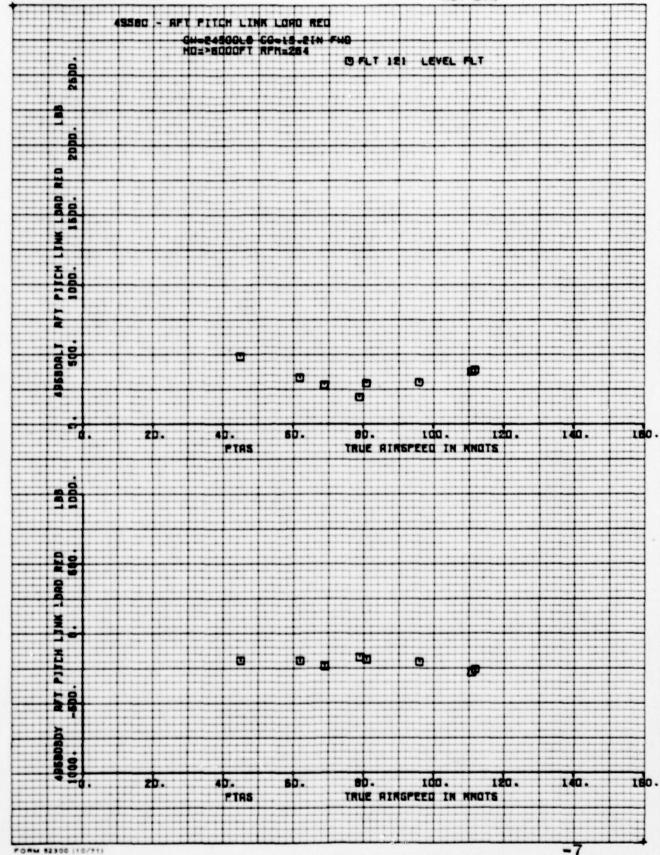
D210-11168-3

NUMBER! VOLUME 7

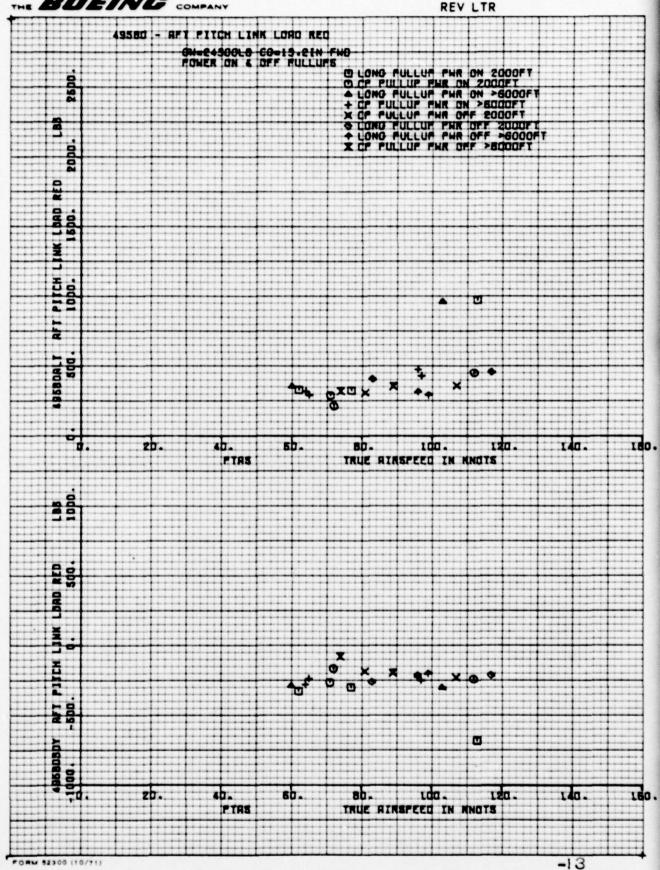
THE BOEING COMPANY REV LTR (9580 - AFT PITCH LINK LOAD RED 00-84800L8 GO-18-21N FUO BALT 117 LEVEL ALT OFLT 119 LEVEL ALT AFLT 121 LEVEL ALT PITCH LIMK LOAD RED 1000. 1500. 2 0 a A 0 0 0 ZD. AD. 80. | 100. | 120. 140. 80. ISO. TRUE AIRSPEED IN MNOTS PIRE APT PITCH LINK LDAD RED GDD. 0. 540. 0 . . 80. 100. 1 TRUE RIRSPEED IN MNOTE BD. 60. 120 . 140. 180. PTRE

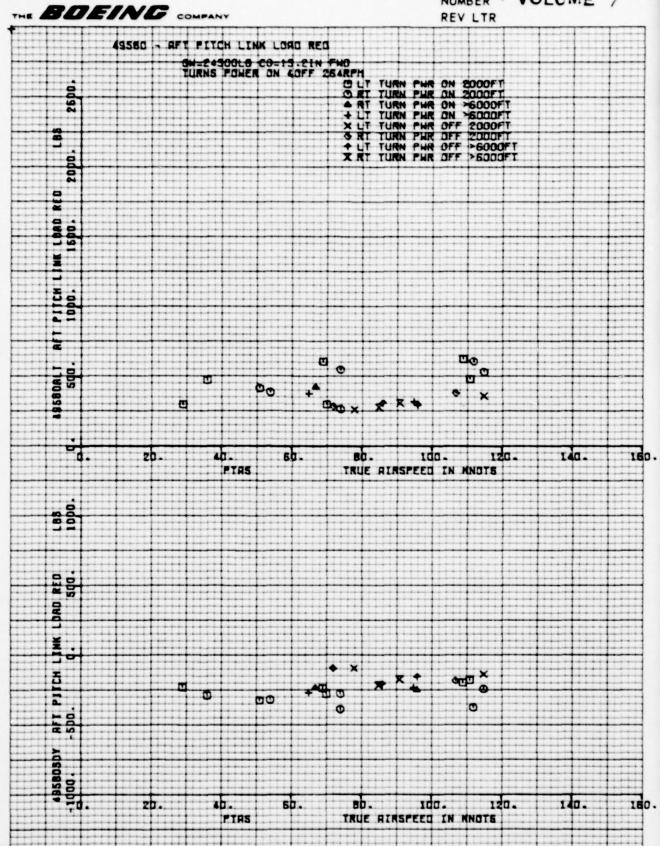
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NUMBER | VOLUME 7



NUMBER





1

NUMBER REV LTR

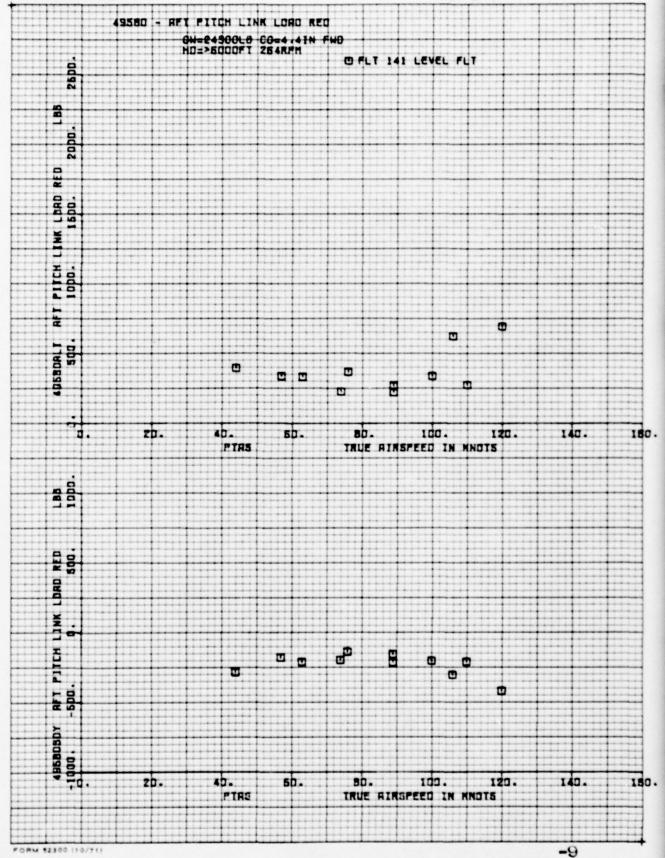
THE BOEING COMPANY 49580 - RFT PITCH LINK LORD RED 0H=24300LB CO=13.21N FHD 264RPM O SPIRAL DESCENT 2500 PITCH LINK LOAD RED 1000- 1500-0 0 四 0 0 如. 40. 5D. 100. 150. BD. . . 140. PTRS TRUE RIRSPEED IN KNOTS 100 AFT PITCH LINK LDAD RED SDO. 600. 180. 4D. 100. 140. 20. TRUE AIRSPEED IN KNOTS PTAS

NUMBER

FORM \$2300 (10/71)

REV LTR 49580 - AFT PITCH LINK LOAD RED ON-24900LB CO-19.21N FND D FPD 2000FT
O SUIDROTATION 2000FT
A PPD >6000FT
+ SUIDROTATION >5000FT
X PPD REC 2000FT
5 PPD REC >5000FT 26po CINK LORO. P 1 C AFT 49580ALT 540. \* " ° 50. zb. Ab. 100. 80. 120. 140. 160. PTAS TRUE RIRSPEED IN KNOTS 1000 AFT PITCH LINK 40. 50. 80. 100. 120. 140. 160. zb. TRUE HIRSPEED IN KNOTS PTAS

NUMBER



VOLUME 7 NUMBER

BOEING COMPANY

REV LTR 49580 - AFT PITCH LINK LOAD RED SHEE45000LG CO-4.4 FHD E64RFM HULLUPS POWER ON & OFF D LONG PULLUP PHR ON 2000FT
D CP PULLUP PHR DN 2000FT
LONG PULLUP PHR DN>6000FT
LONG PULLUP PHR DN>6000FT
X LONG PULLUP PHR DFF >6000FT
CP PULLUP PHR DFF >6000FT
CP PULLUP PHR DFF 2000FT
X CP PULLUP PHR DFF 2000FT 60 100. 120. ab. 140. 180. 80 . TRUE RIRSPEED IN KNOTS 200 ab. BU . 100. 140. 180. PIRS TRUE AIRSPEED IN KNOTS FORM \$2500 (10/71)

NUMBER

0

FORM \$2300 (10/71)

REV LTR 49580 - AFT PITCH LINK LOAD RED MER ON CONTROL REVERSALS SALS

DUAT CONT REV 2000FT

DUANG CONT REV 2000FT

DUA CONT REV >6000FT

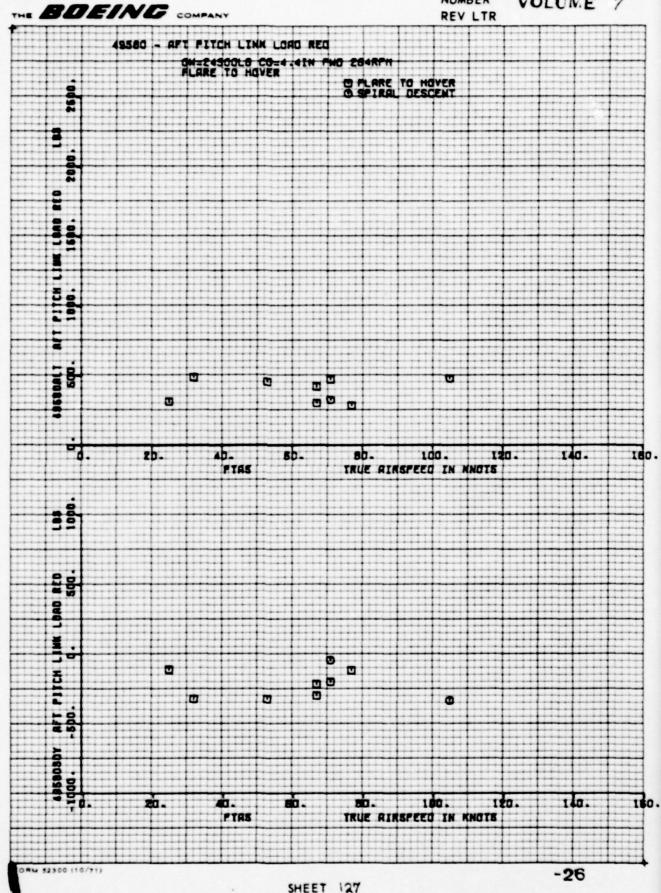
+ LAT CONT REV >6000FT

X LONG CONT REV >6000FT

DUR CONT REV >5000FT 1 COO. P11CH 1000. 8 . 4 Ida. 120. zb. 140. 180. Ab. BD. Bb. PTRE TRUE RIRSPEED IN MNOTS 30 0 ţ . . AD. 100. 150. PTAS TRUE AIRSPEED IN MNOTS

D210-11168-3 VOLUME 7

NUMBER REV LTR



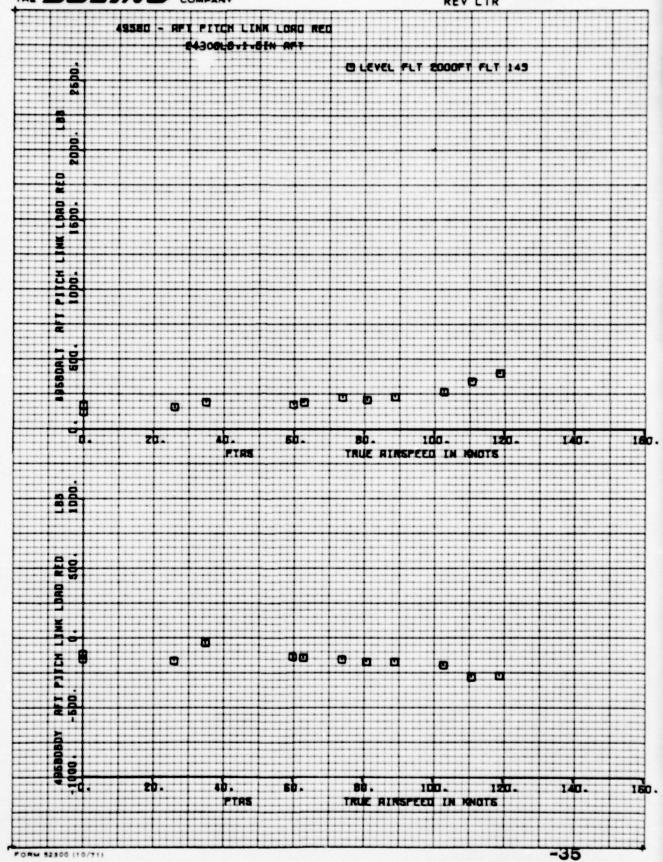
NUMBER VOLUME 7
REV LTR

THE BOEING COMPANY

3

49580 - AFT PITCH LINK LOAD RED GH 64500L8 G0-4-4EN FHO 264RFM O A/R STERDY 2 6 2 6 2 6 RF T U 100. 180-FTRS TRUE AIRSPEED IN MNOTS 200 **0** 0 0 80. 100. 120. ab. BD . 140. 180. TRUE AIRSPEED IN KNOTS PTAS FORM \$2300 (10/71) -30

D210-11168-3 ·
NUMBER VOLUME 7



PREPARED BY: J. Bendo

CHECKED BY:

THE BOEING COMPANY DATE:

8/28/78

NUMBER D210-11168-3 REVLTR Volume 7 MODEL NO.

4.4 Aft Drive Scissors Arm

0

100.

TRUE RIRSPEED IN MOOTS

50.

PIRE

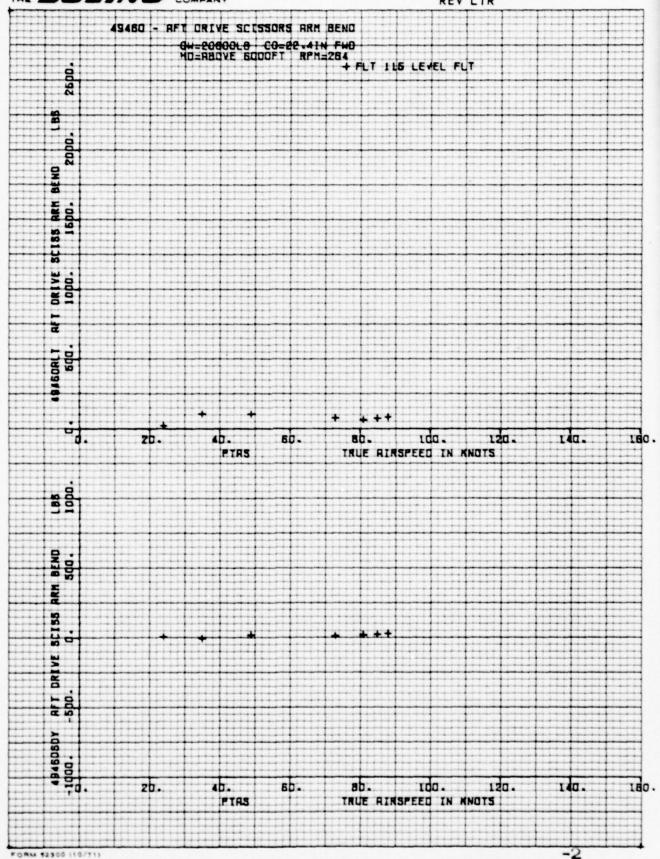
ORM \$2300 (10/71)

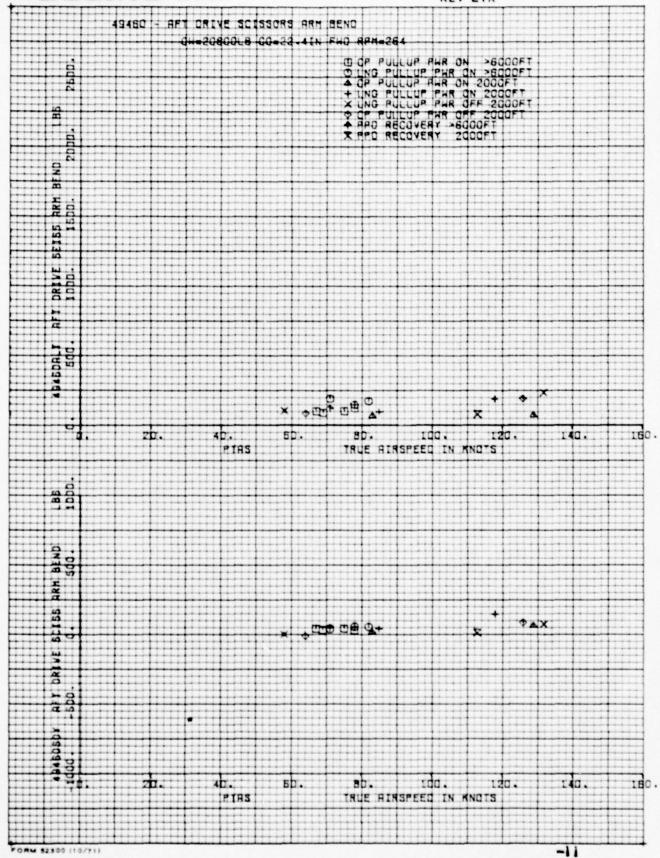
0 0 0 mm P . 8 m

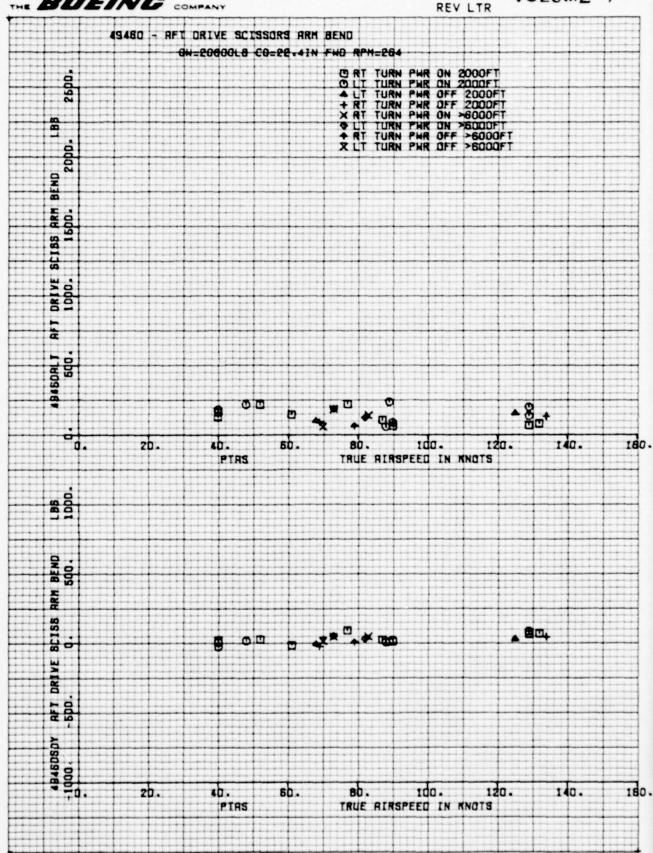
180 .

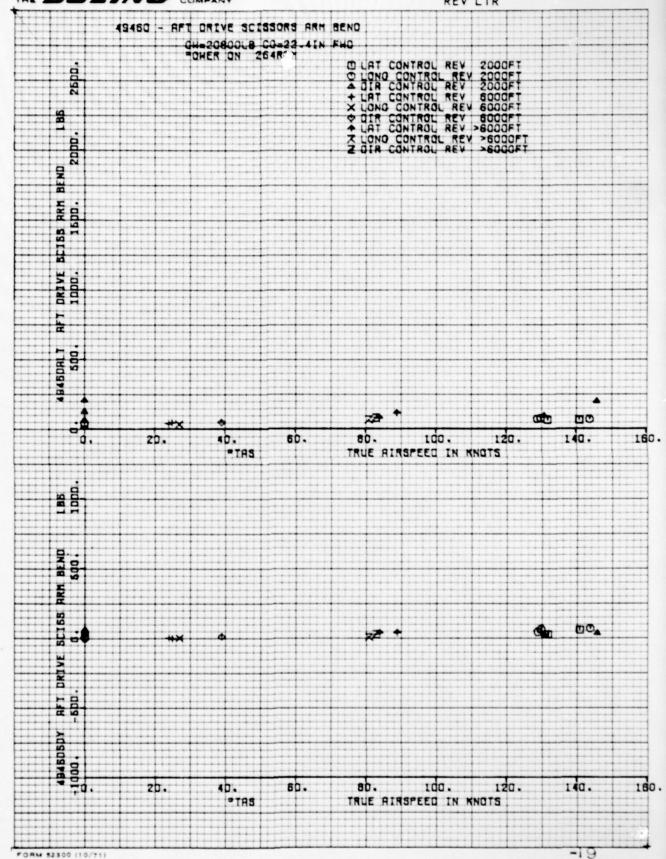
NUMBER! VOLUME 7

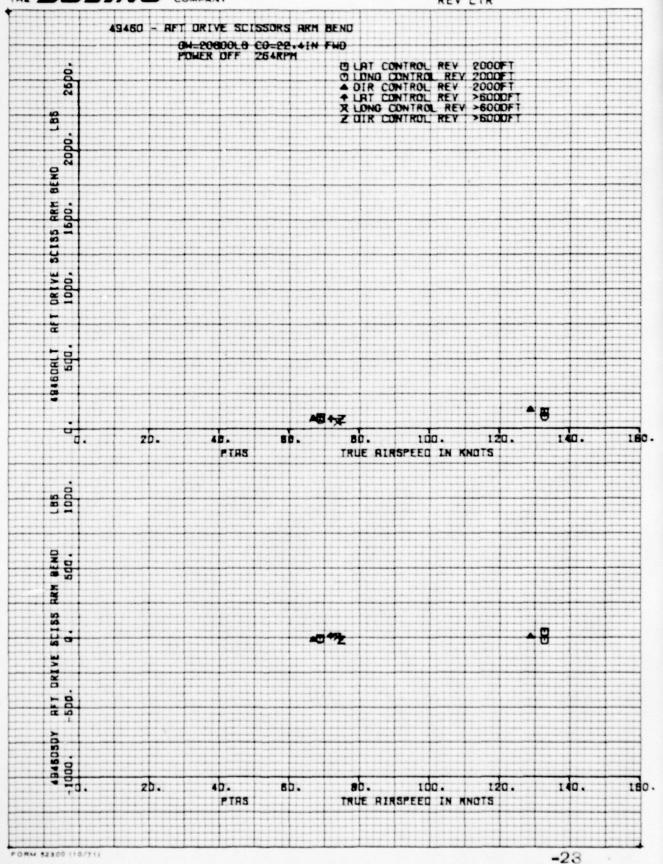


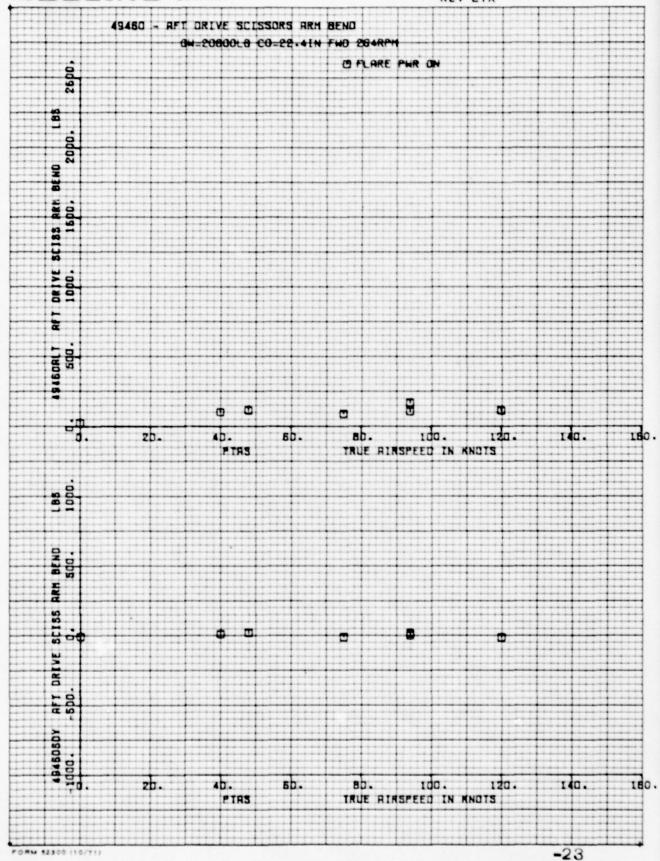








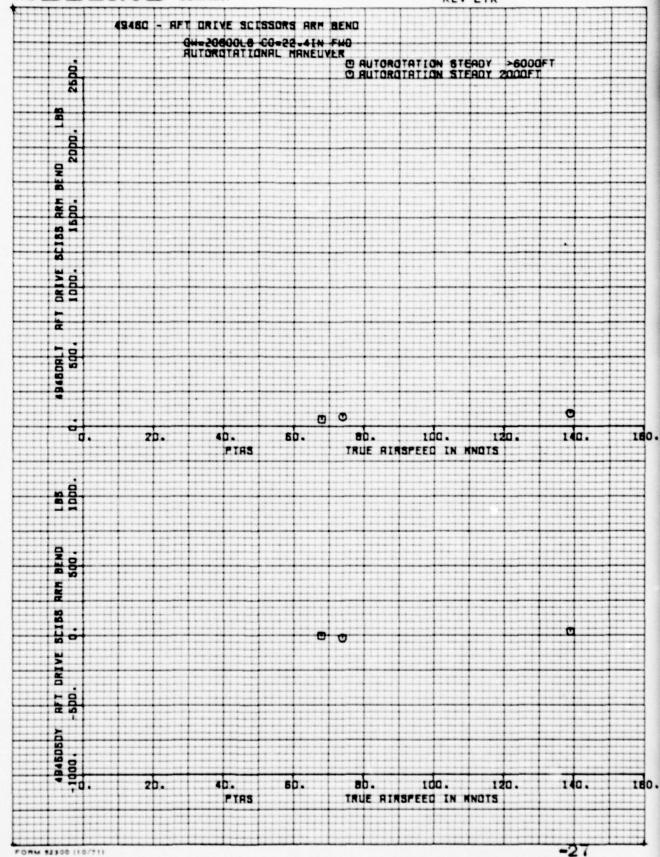


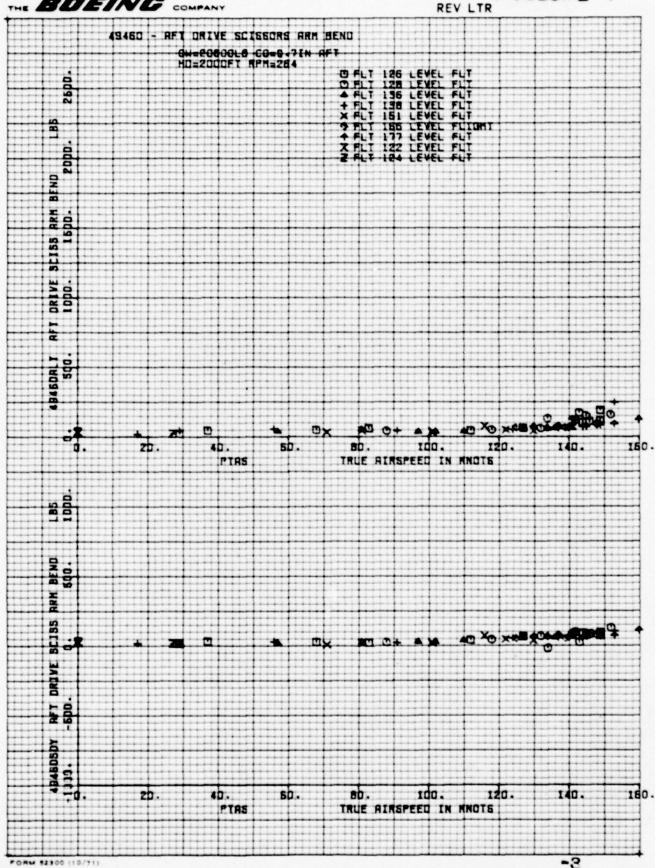


NUMBER ! VOLUME 7 REV LTR

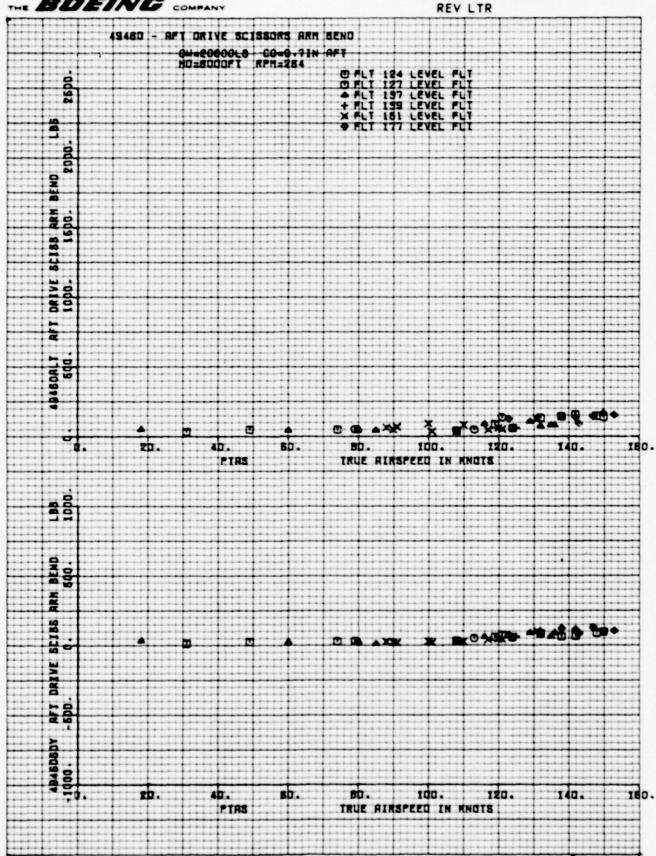
THE BOEING COMPANY

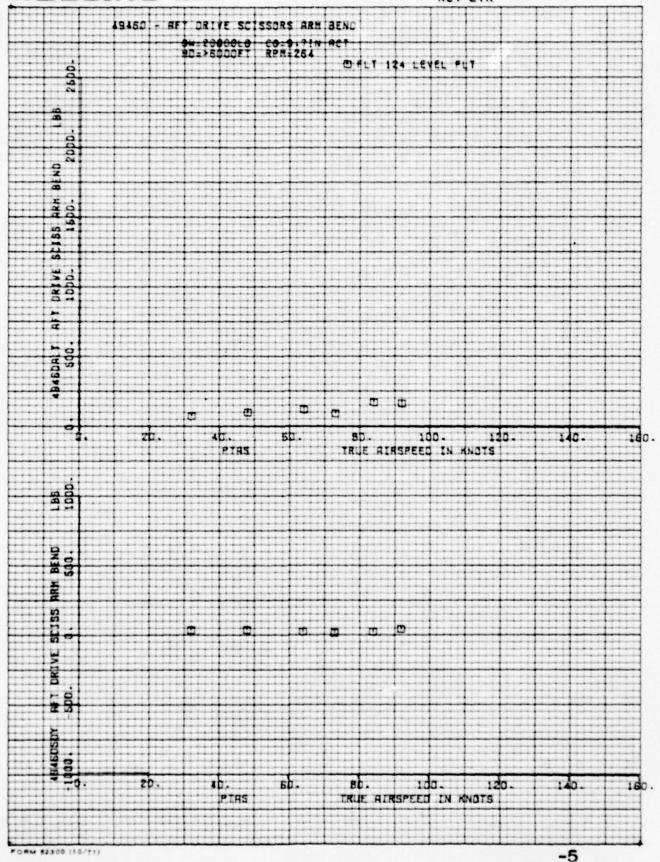
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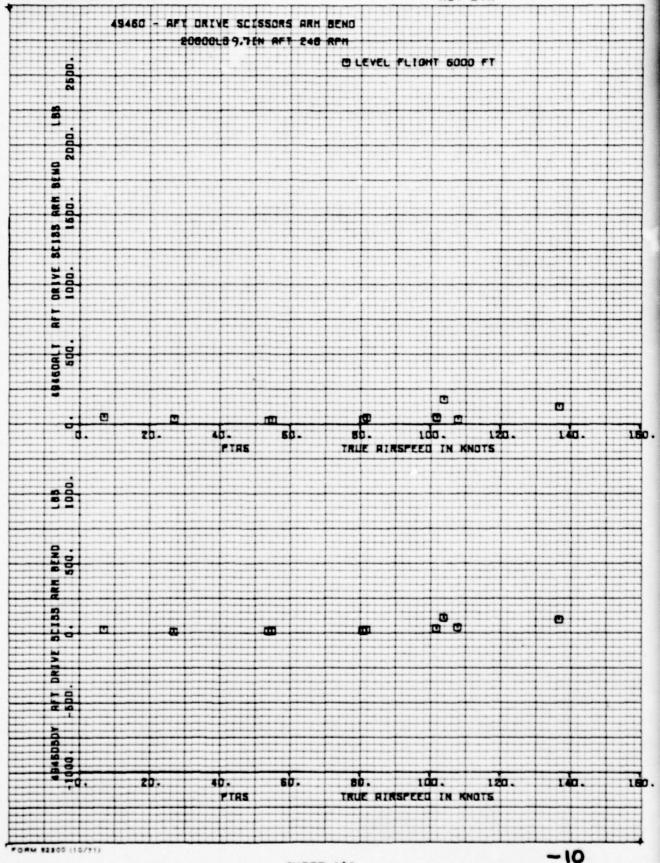
FORM \$2300 (10/71)

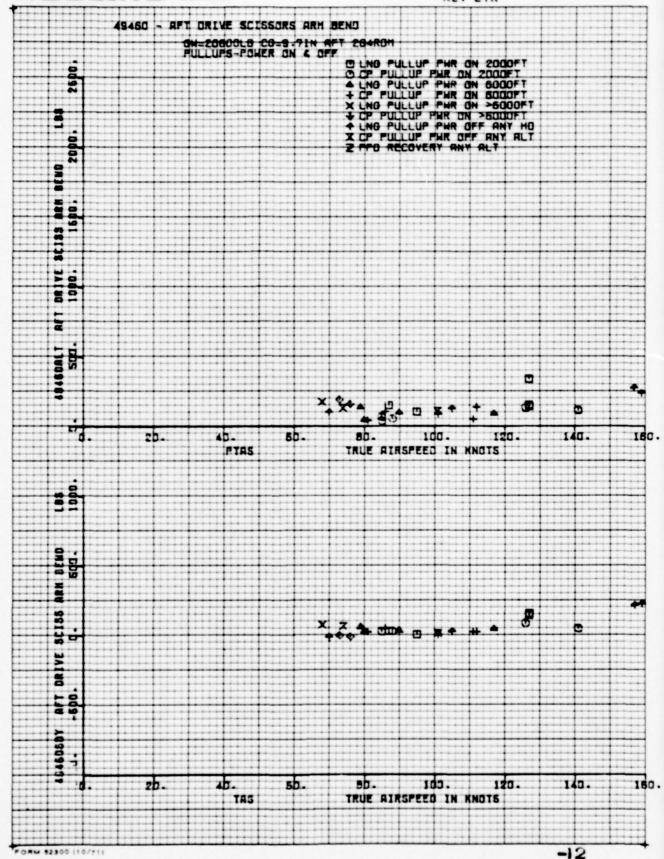




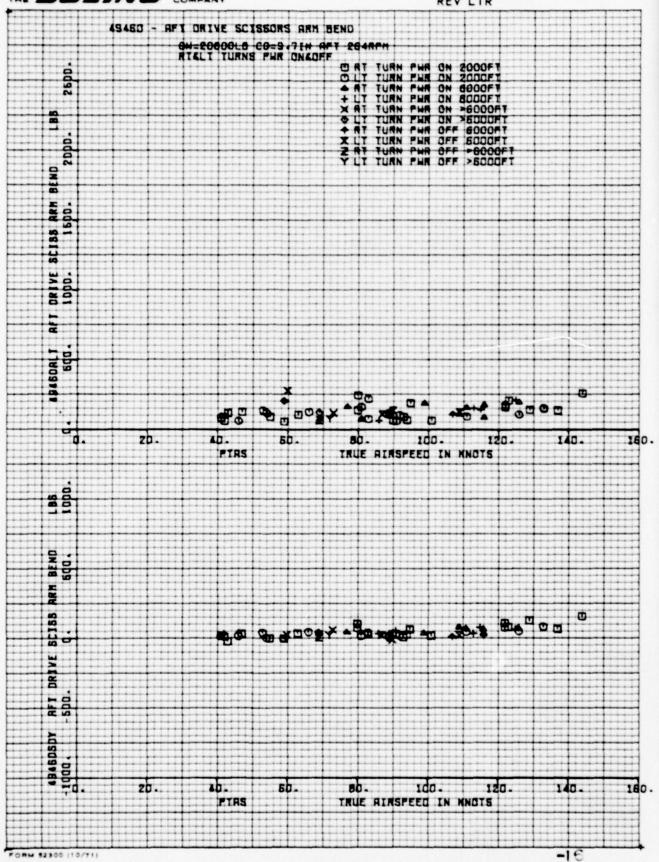
NUMBER REV LTR

THE BOEING COMPANY

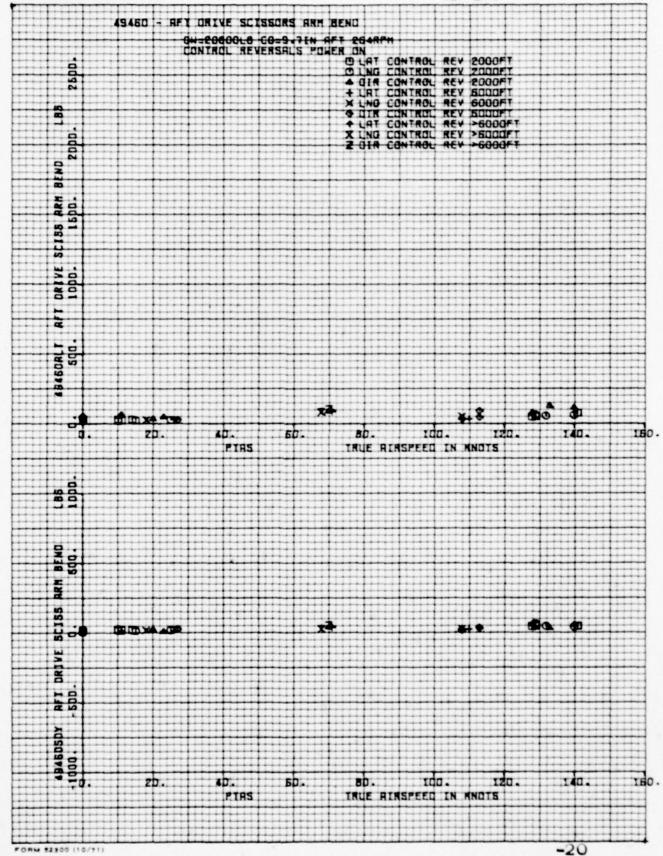


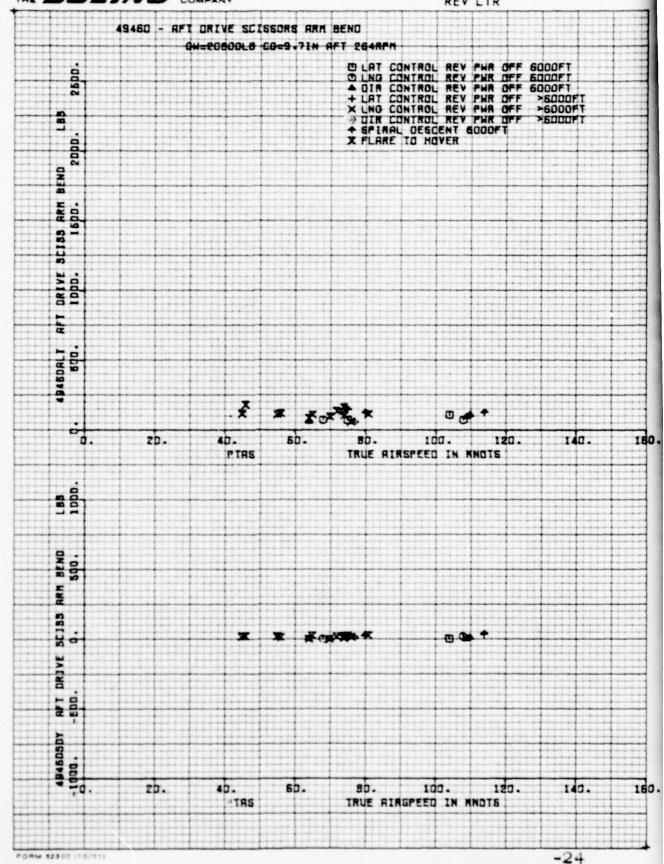


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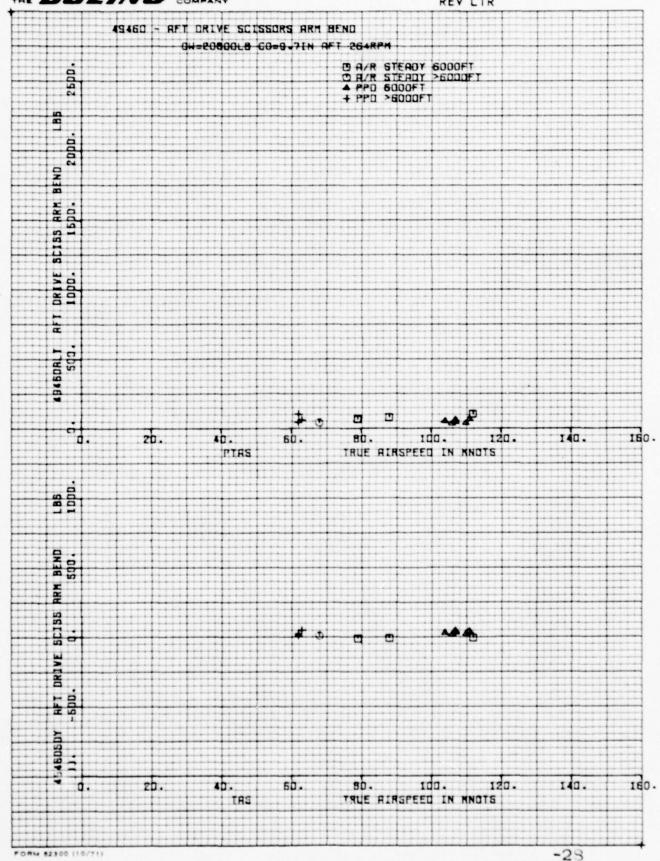


4.5









80.

100.

TRUE RINSPEED IN MNOTS

120.

140.

-6

160.

60.

AD.

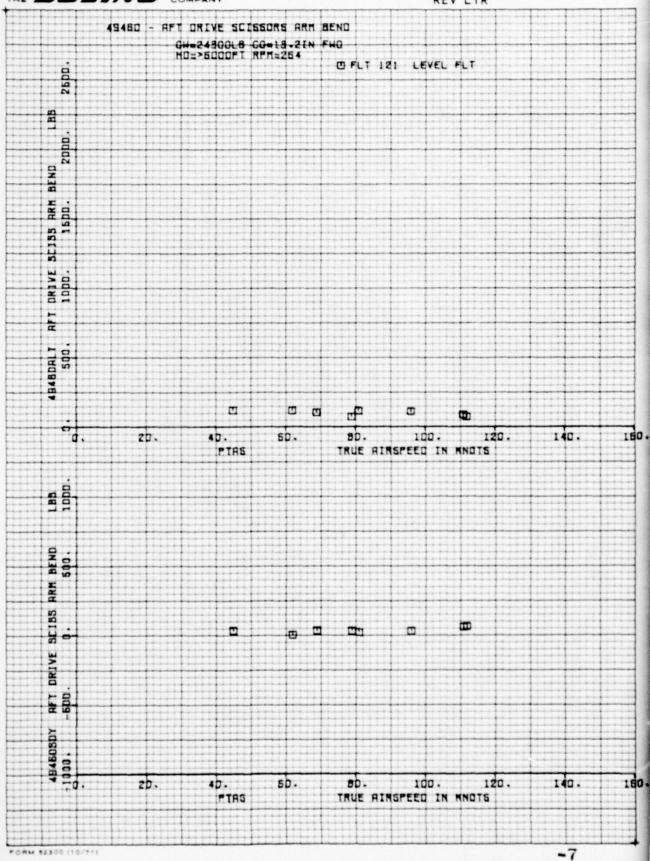
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\*B\*6050Y

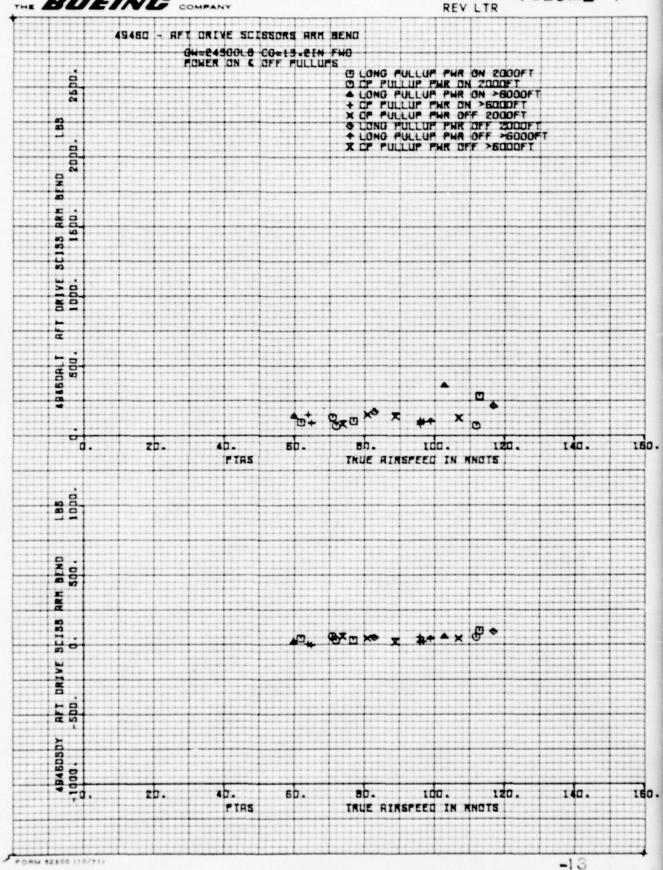
FORM \$2300 (10/71)

zb.









-17

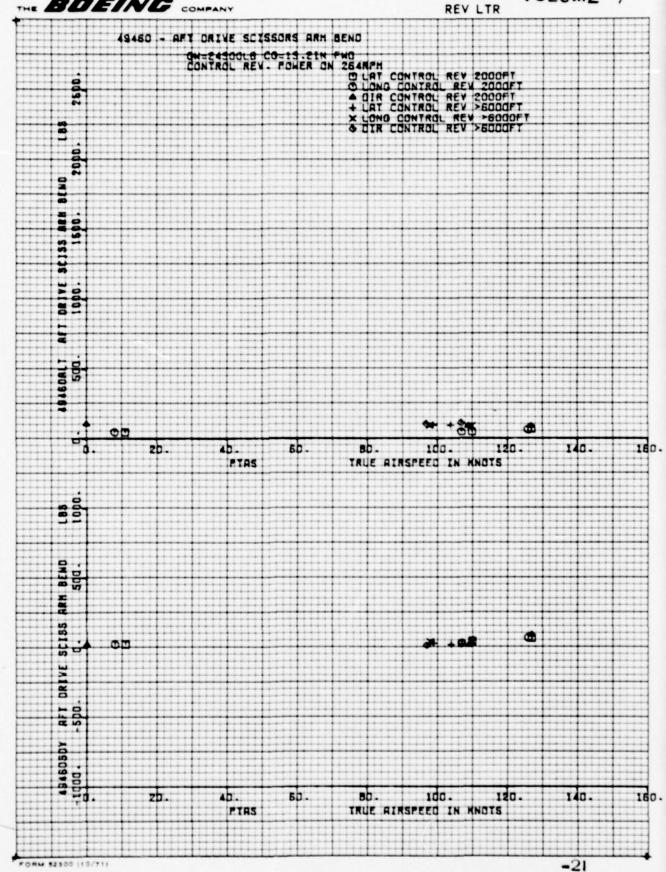
REV LTR

49460 - AFT DRIVE SCISSORS ARM BEND TURNS PONER ON GOFF 254RPH APPI
O LT TURN PHR ON 2000FT
O RT TURN PHR ON 2000FT
A RT TURN PHR ON >6000FT
+ LT TURN PHR ON >6000FT
+ LT TURN PHR OFF 2000FT
O RT TURN PHR OFF 2000FT
TURN PHR OFF >6000FT
X RT TURN PHR OFF >6000FT
X RT TURN PHR OFF >6000FT 2600. 00 20. 100. 120. 140. 150. TRUE RINSPEED IN MNOTS FTRS DRIVE 50. 100. 120. zb. ab. 160. TRUE RINSPEED IN MNOTS PTRS FORM \$2500 (10/71)

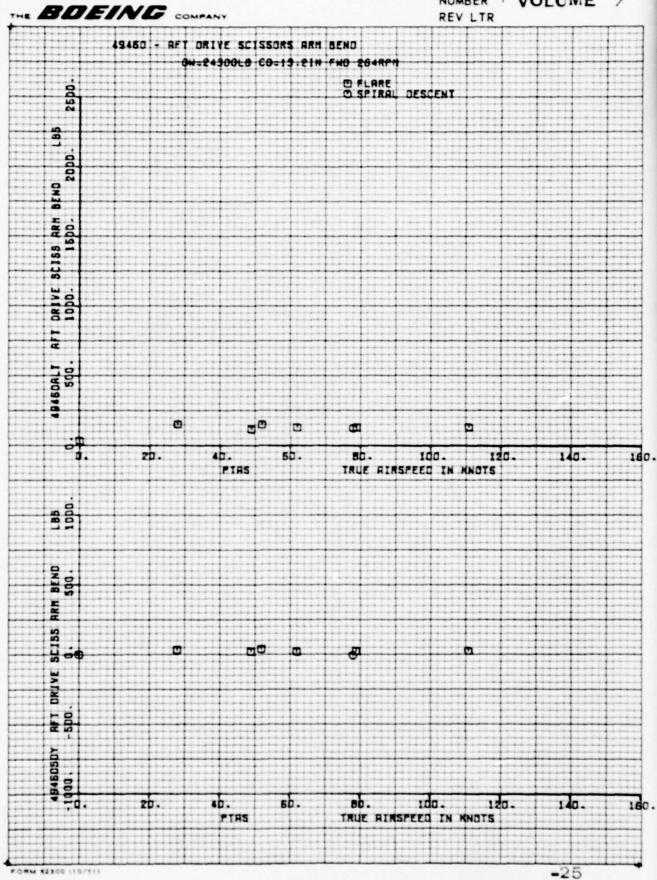
THE BOEING COMPANY

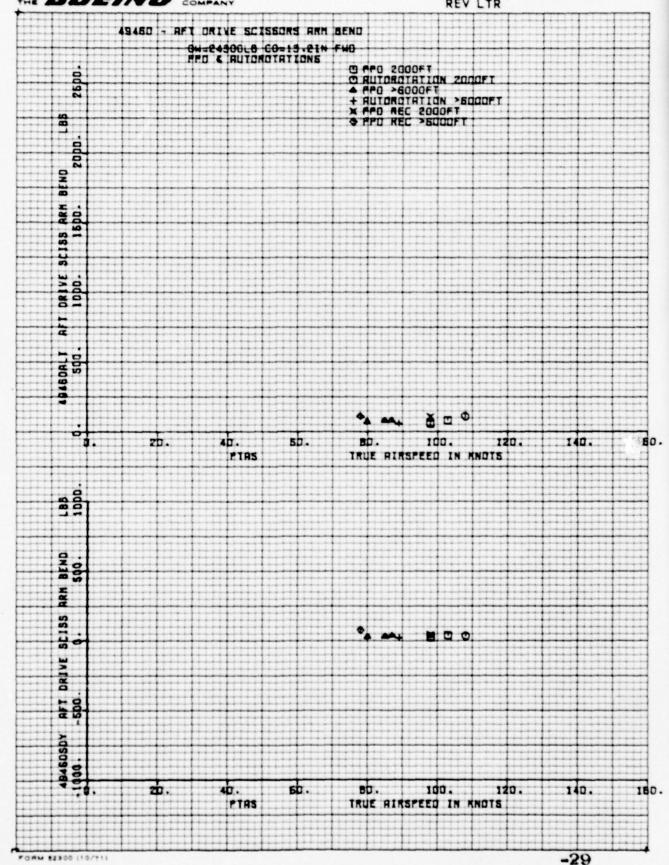
THE BOEING COMPANY

NUMBER ! VOLUME 7



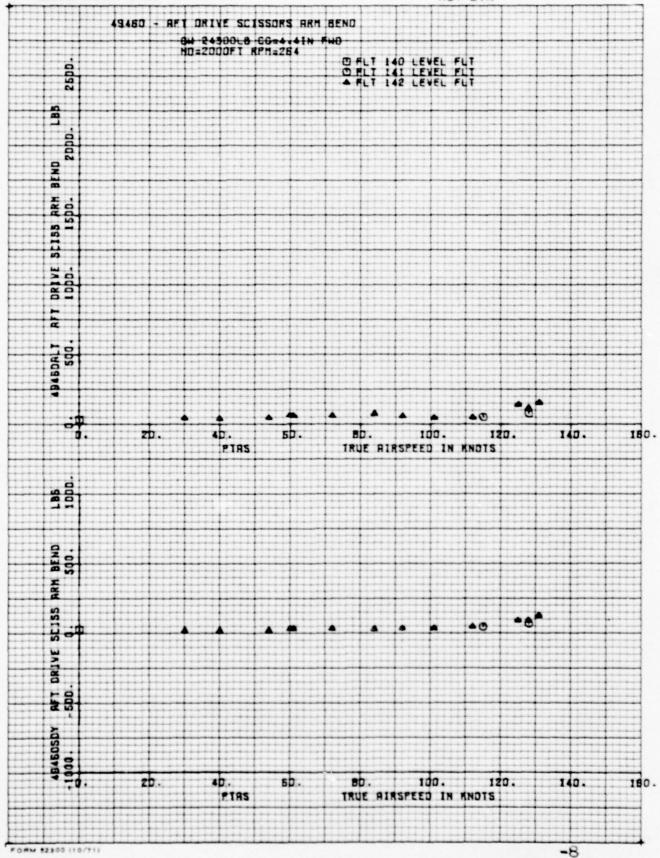
NUMBER | VOLUME 7



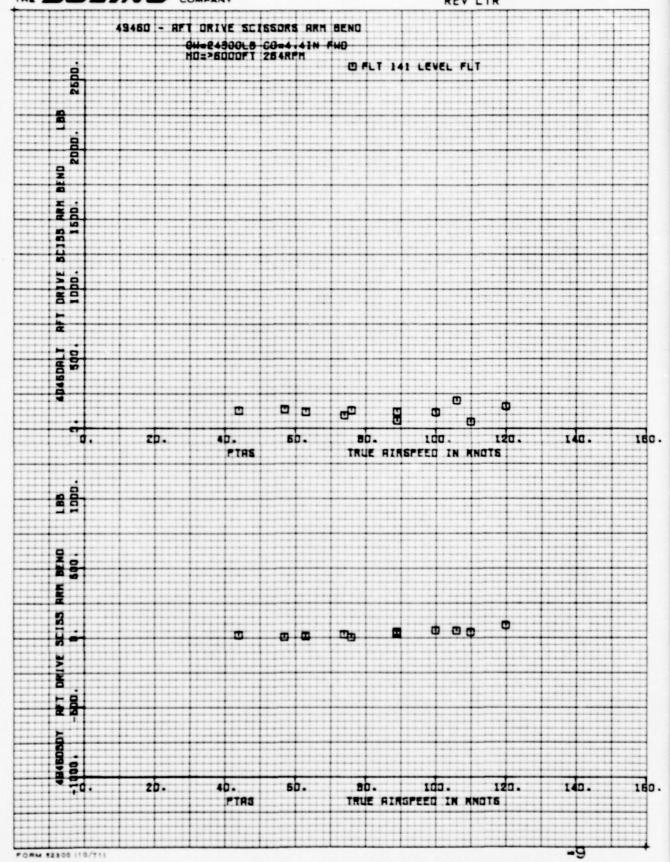


NUMBER | VOLUME 7

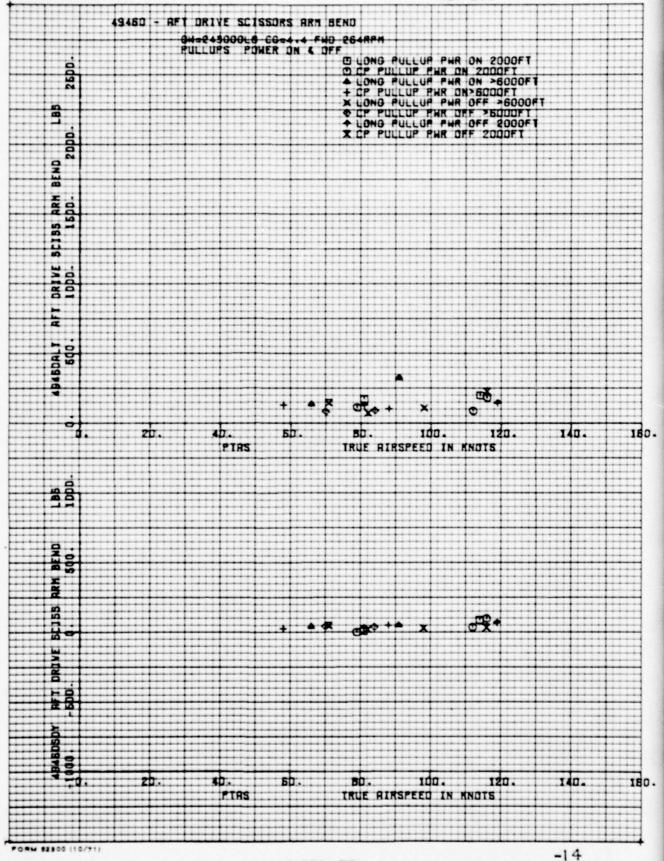
THE BOEING COMPANY



THE BOEING COMPANY



REV LTR



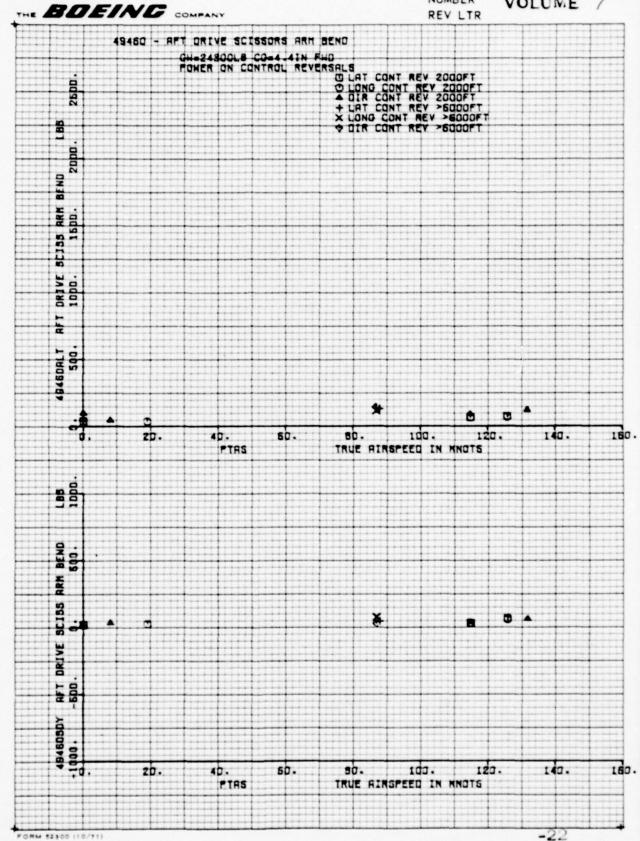
NUMBER

THE BOEING COMPANY

REV LTR 49460 - RFT DRIVE SCISSORS ARM BEND GH=24300L8 C9=4 4 FHO
FOHER ON & OFF TURNS 264RPM

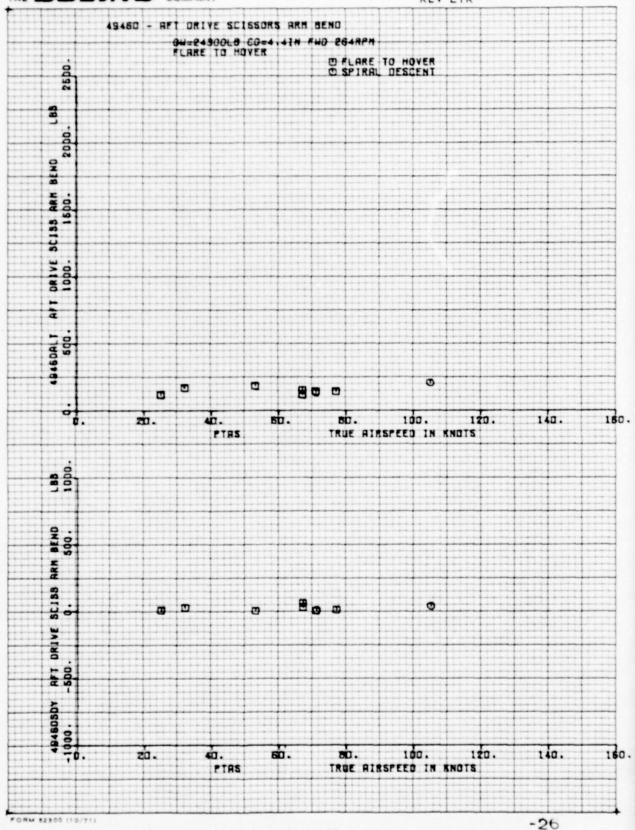
O LT TURN PHR ON 2000FT
O RT TURN PHR ON 2000FT
4 LT TURN PHR ON >6000FT
HRT TURN PHR ON >6000FT
X LT TURN PHR OFF 2000FT
THRT TURN PHR OFF >6000FT
X LT TURN PHR OFF >6000FT
X LT TURN PHR OFF >6000FT 2600, 1000. 1600. AF I Squ. mo of o m 0 9 AD. 50. 80. 100. 120. 140. 160 . ZD. TRUE RIRSPEED IN KNOTS FIRS 1000 8C188 DRIVE 4B46DSDY 40. 60. 80. ıda. 120. 140. 160 TRUE AIRSPEED IN KNOTS PTRS FORM \$2300 (10/71) -13

NUMBER REV LTR



3/2

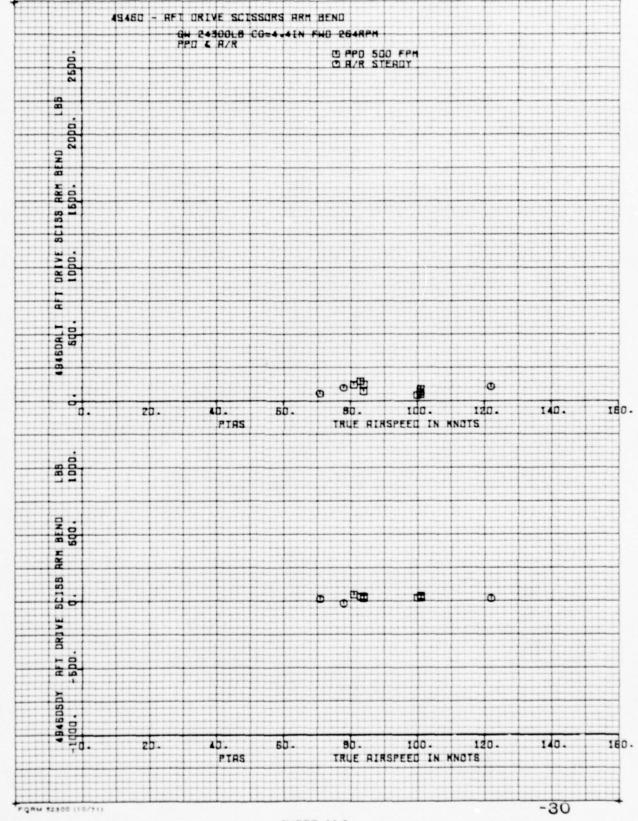




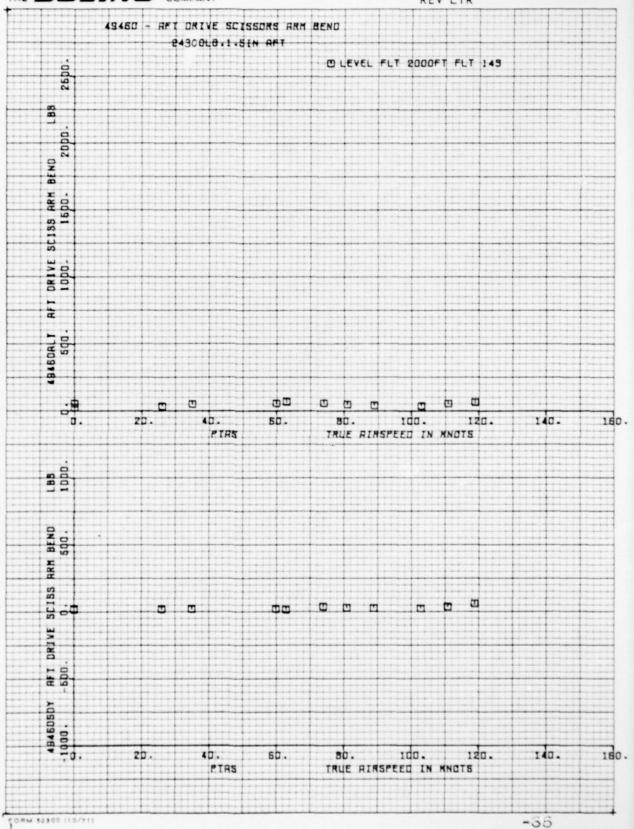
VOLUME 7 NUMBER

THE BOEING COMPANY

REV LTR







PREPARED BY: J. Bendo CHECKED BY:

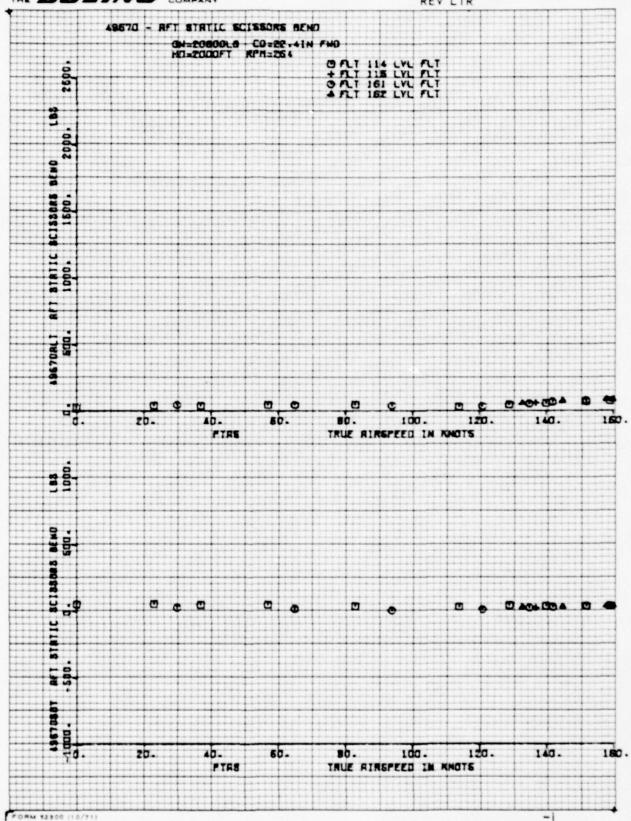
NUMBER D210-11168-3 REVLTR Volume 7

THE BOEING COMPANY DATE:

8/28/78

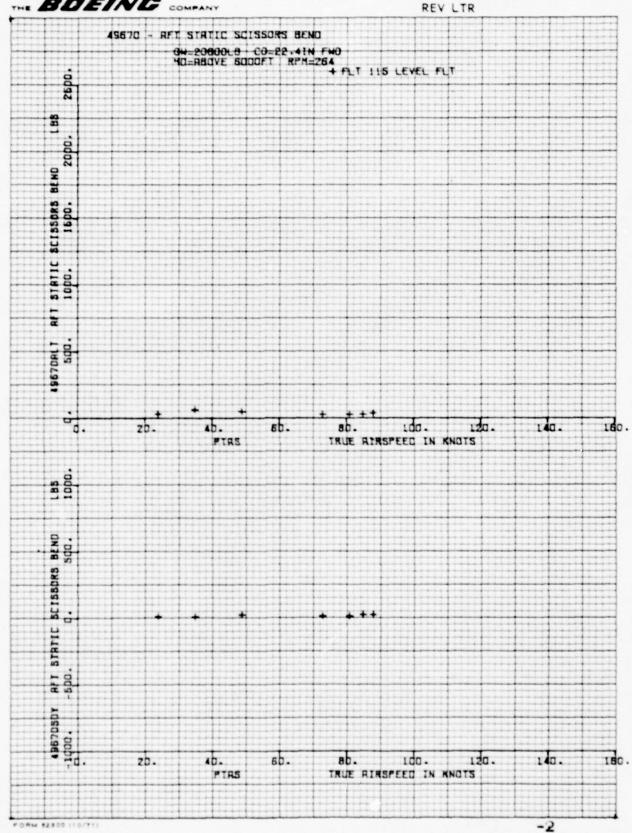
MODEL NO.

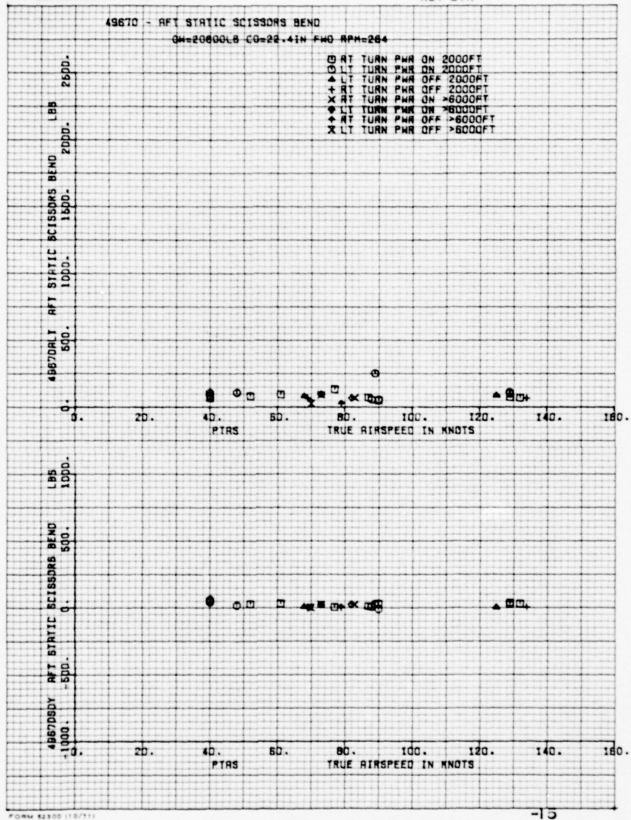
4.5 Aft Static Scissors



VOLUME 7 NUMBER

THE BOEING COMPANY

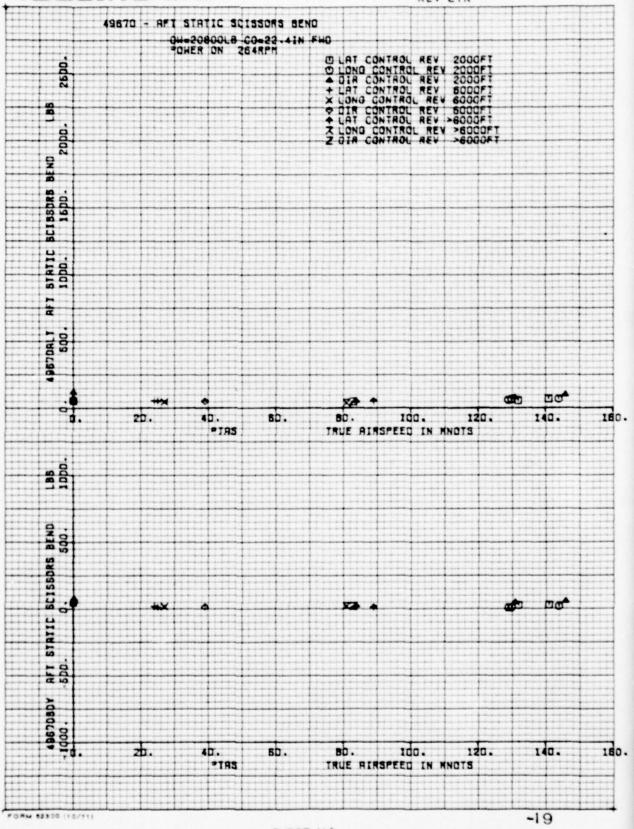




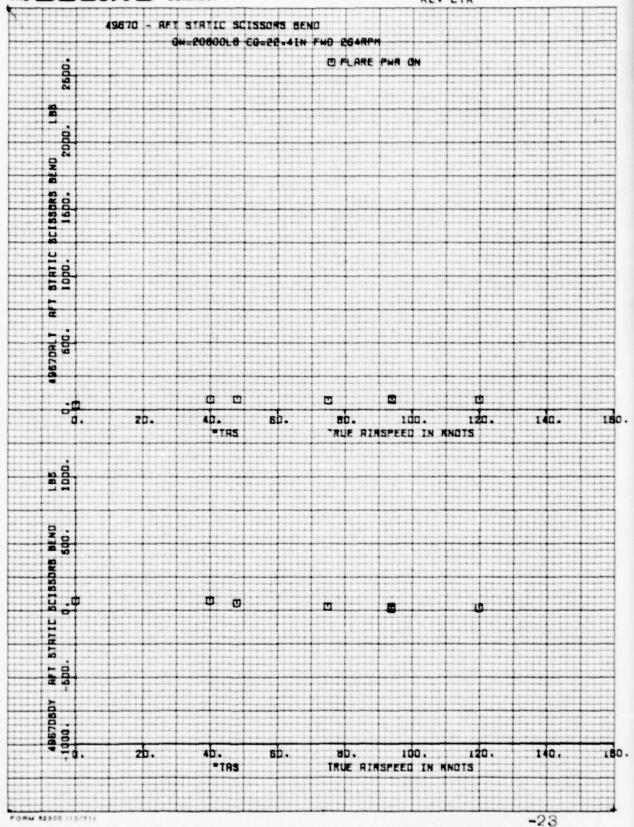
NUMBER VOLUME 7

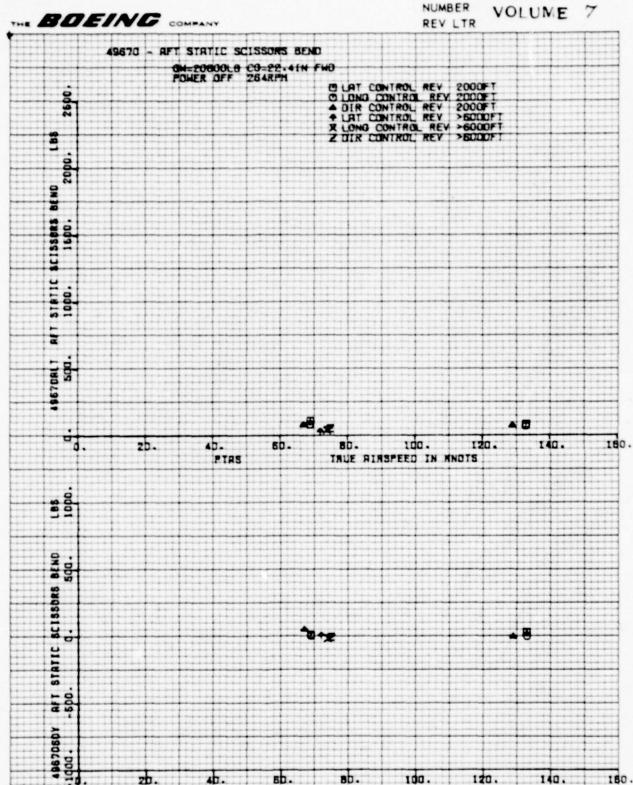
THE BOEINE COMPANY

REV LTR



THE BOEING COMPANY REV LTR





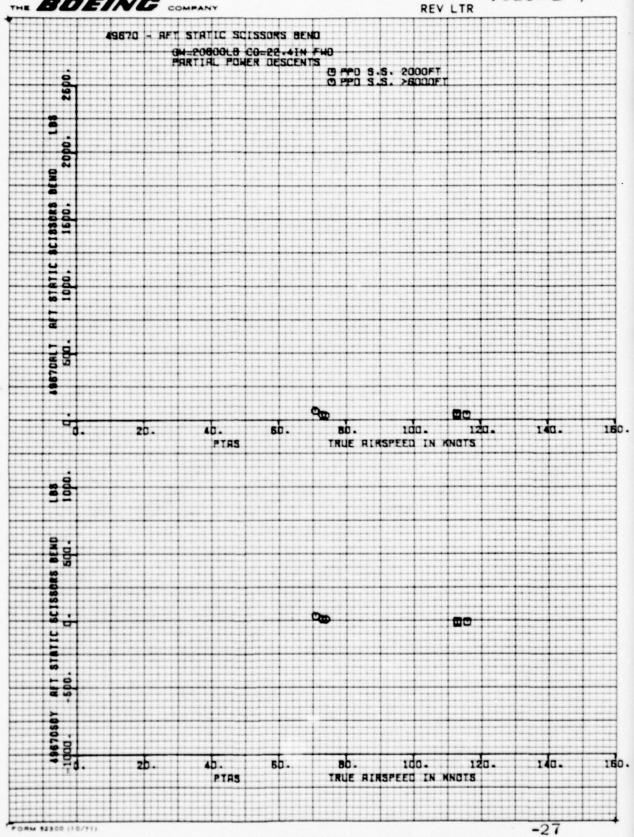
TRUE RIRSPEED IN KNOTS

-23

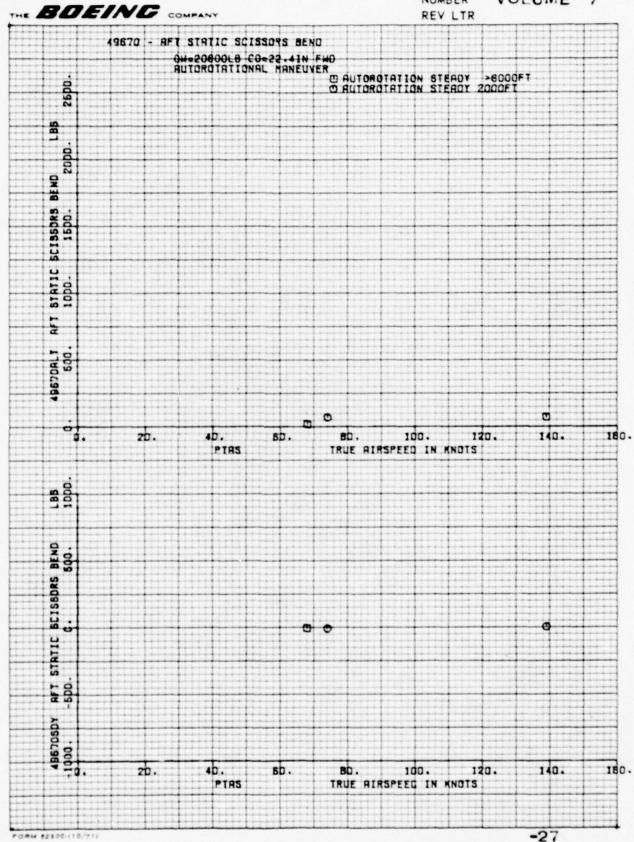
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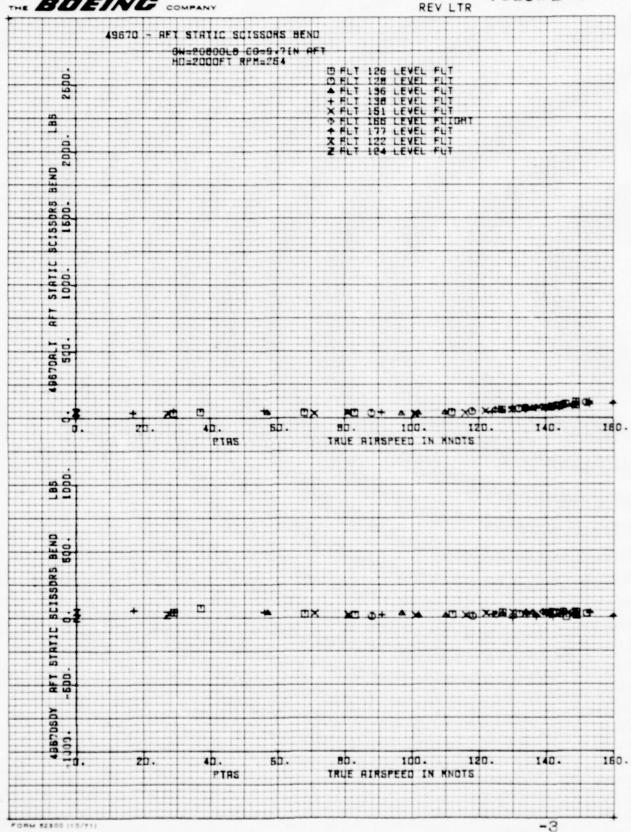
FORM \$2300 (10/51)

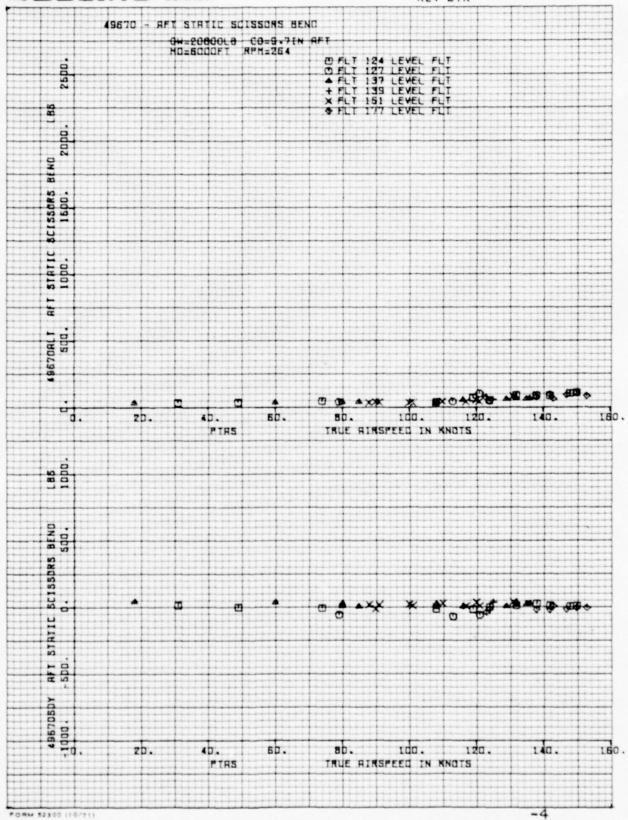




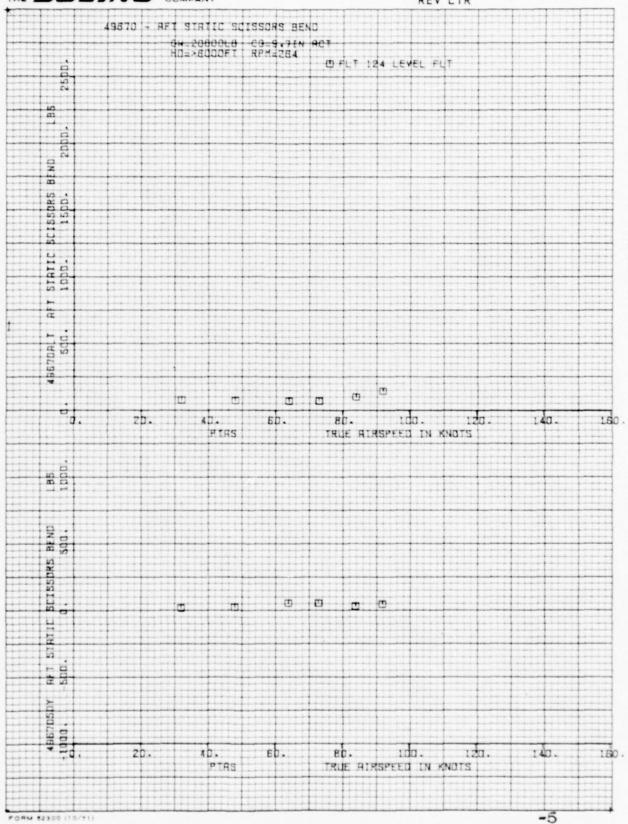
NUMBER REV LTR



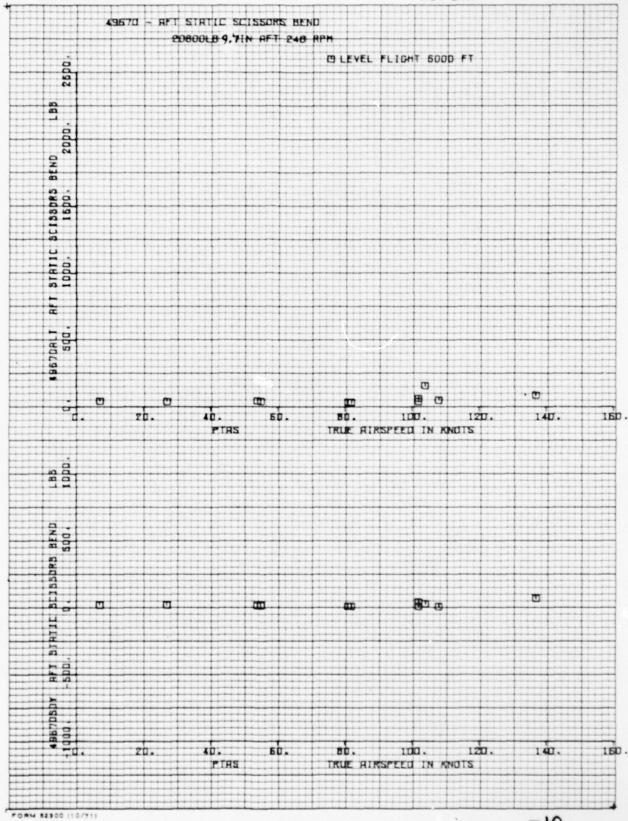


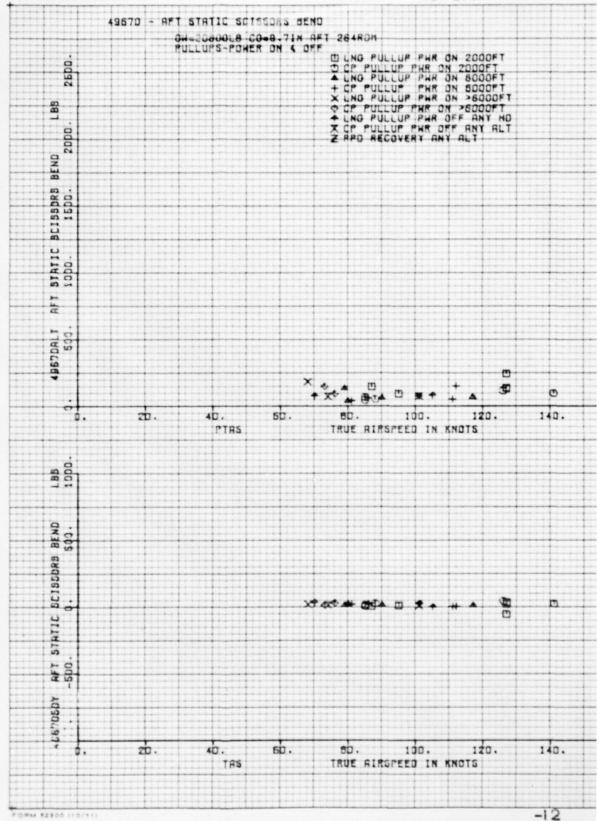


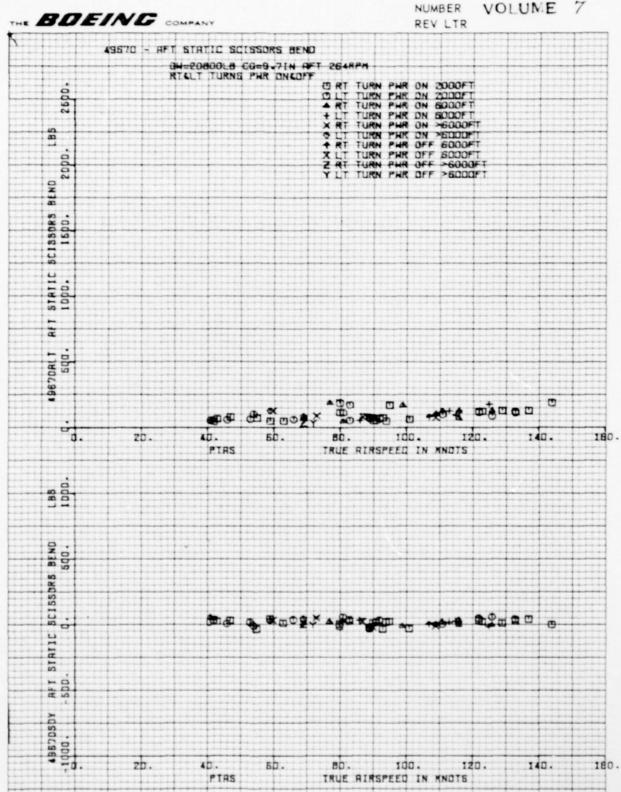
SHEET 175

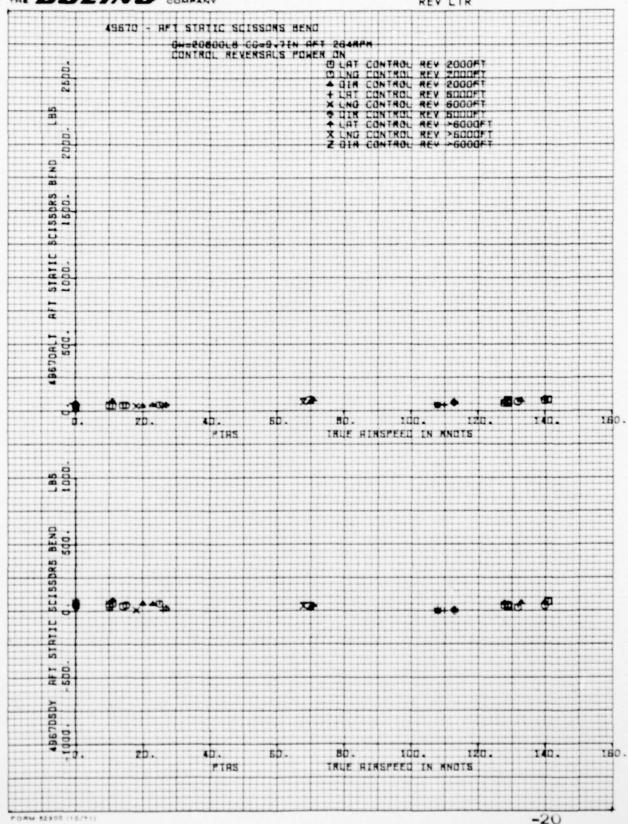


THE BOEING COMPANY

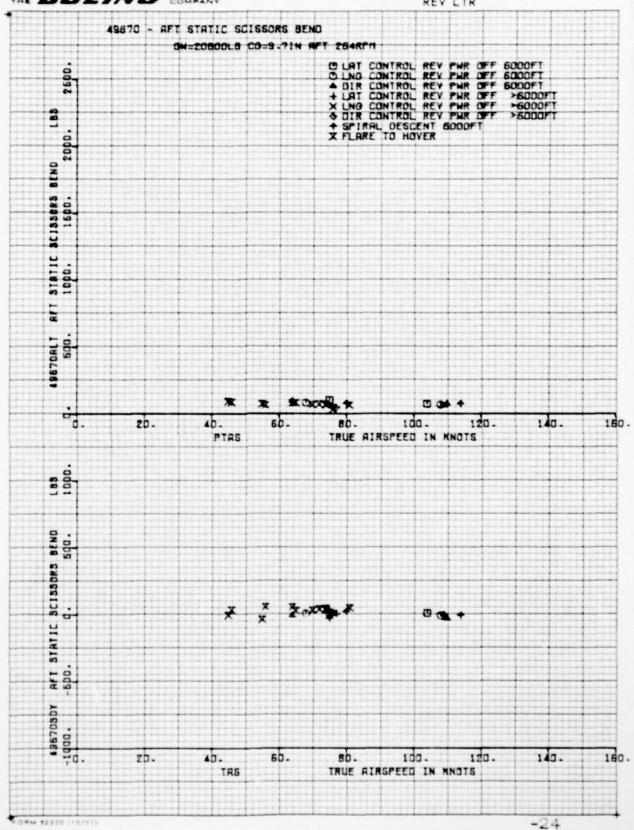


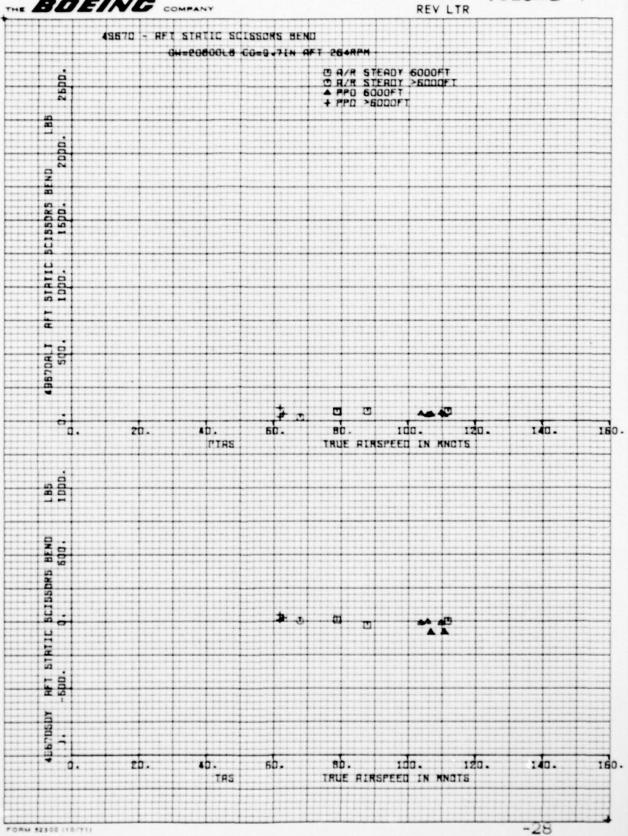


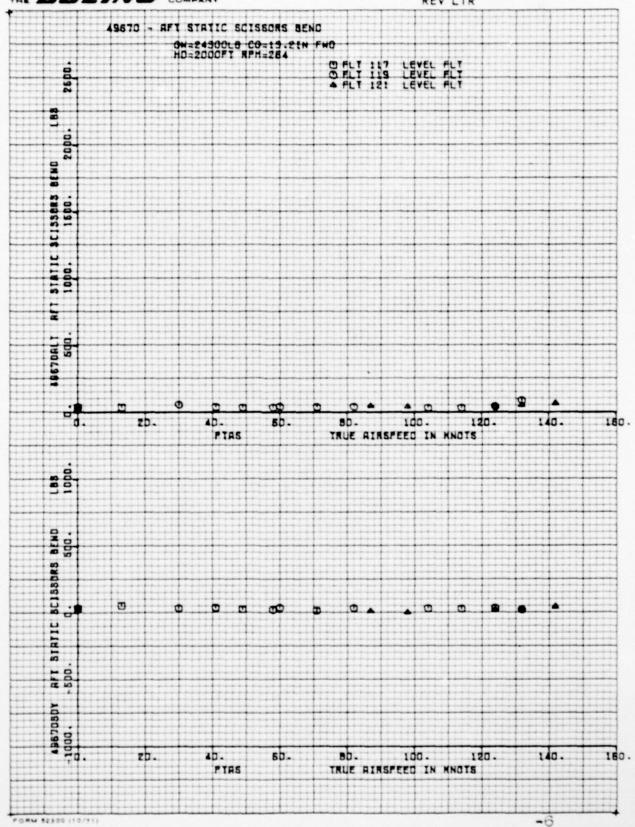




10







NUMBER THE BOEING COMPANY REV LTR 49570 - RET STRTIC SCISSORS BEND GH=24300L8 GG=15-21N FHO HD=>6000FT RPH=264 BALT 121 LEVEL ALT 2500 BEND SCISSORS I STRTIC : 19670ALT 500. @ m 0 BD. 140. 160 . zb. AD. 80. 100. 120. TRUE RIMSPEED IN MNDTS PTRS 1000 STATIC BCISSDRS BEND M 0 0 B

80.

100.

TRUE AIRSPEED IN MNOTS

120.

140.

150.

50.

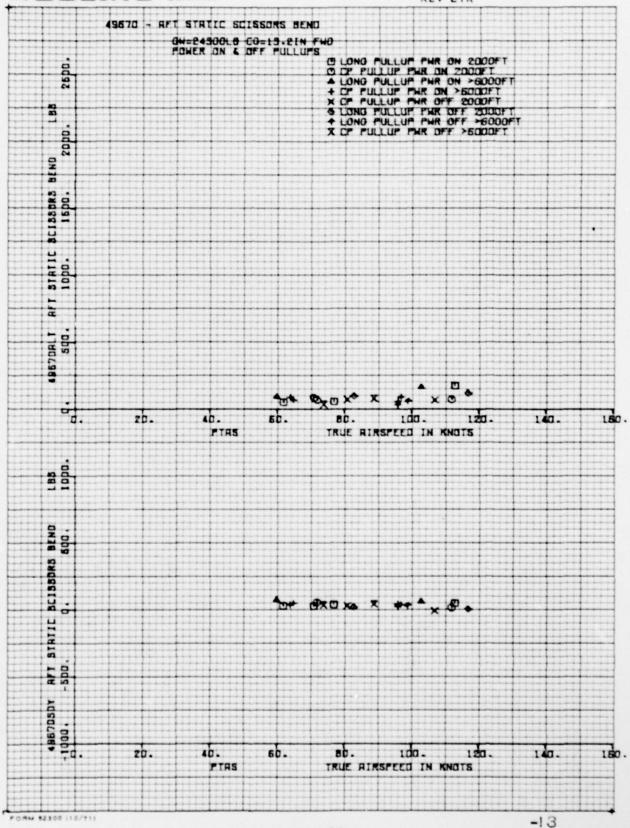
AD.

PIRS

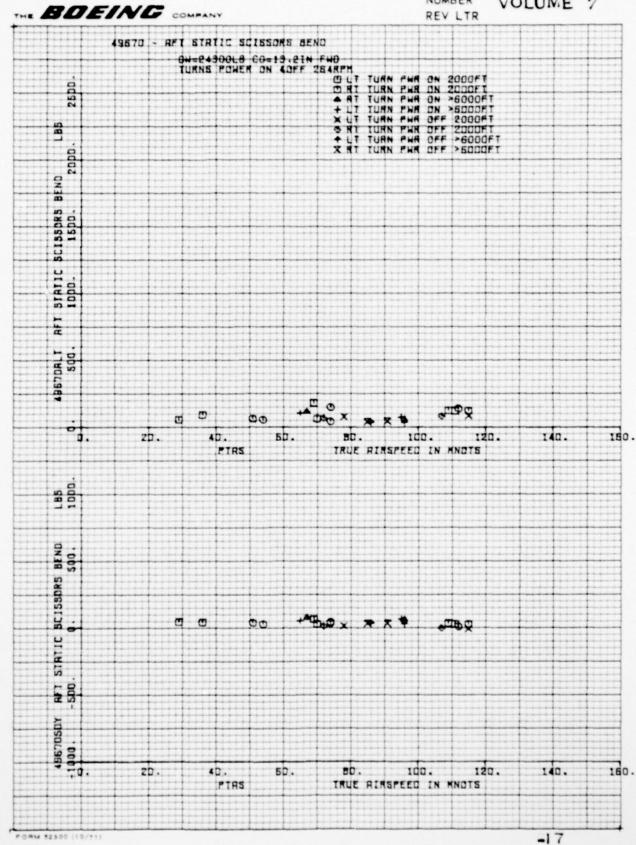
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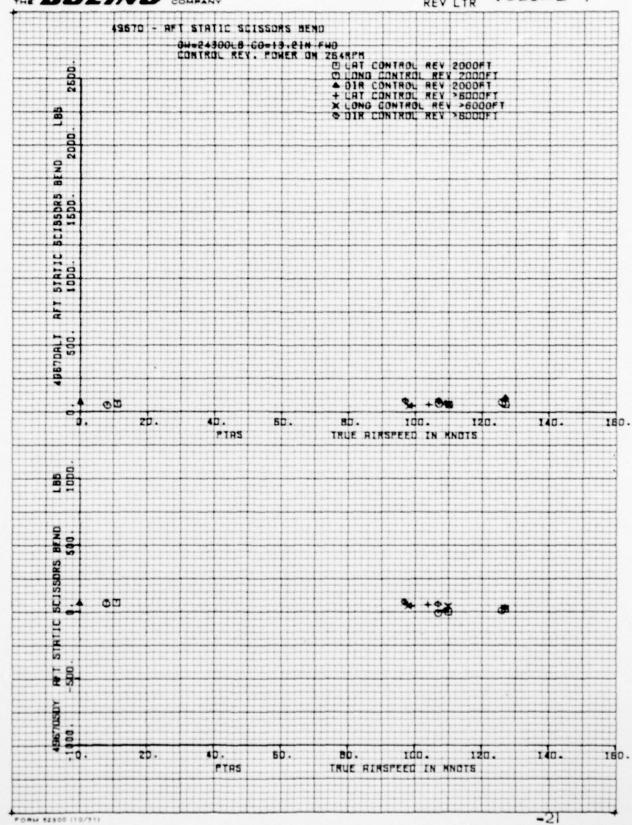
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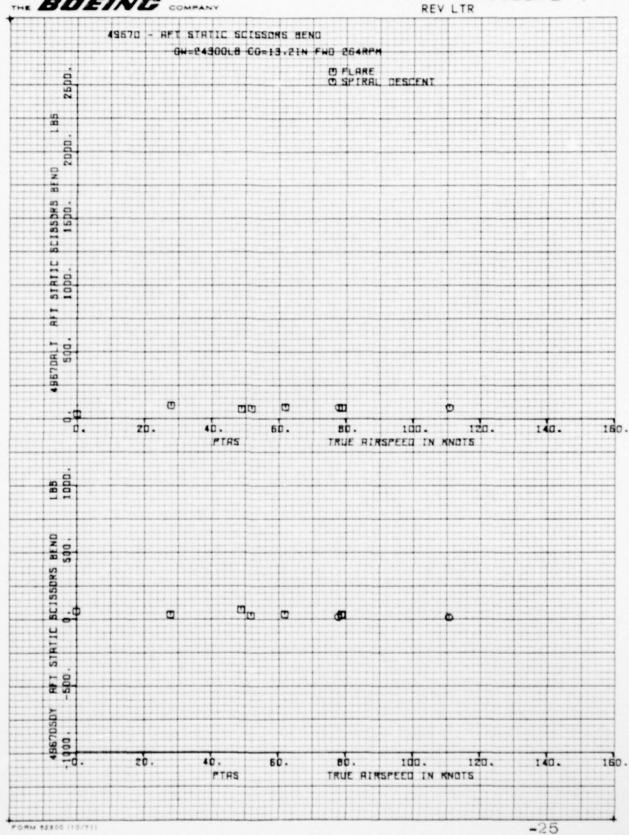
do 33 4.5



NUMBER







NUMBER

THE BOEING COMPANY REV LTR 49670 - AFT STATIC SCISSORS BEND HPD & RUTORDIATIONS D PPO 2000FT
D.RUTDROTRIION 2000FT
A PPO >6000FT
+ RUTCROTRIION >6000FT
× PPO REC 2000FT
> PPO REC >6000FT 188 BEND STATIC SCISSORS 1000. 1500. AFT Squ. **E** 0 0 ٥. zb. 50. 100. 120. 140. 180. AD. 80. PTAS TRUE RIRSPEED IN MNOTS 1000 BCISSDRS BEND Q. 500. E D O STRTIC 496705DY BD. zb. 4D. 80. 100. 120. 140. 160. PTAS TRUE RIRSPEED IN KNOTS

NUMBER

THE BOEING COMPANY REV LTR 49810 - AFT STATIC SCISSORS BEND ON 2410018 CO-4.41N FNO HD-2000FT RPH-284 O FLT 140 LEVEL FUT 19670ALT Squ. 80- 100- 120-4b. 140. 150 TRUE RIRSPEED IN MNOTS PIAS \$C1550R5 BEND - LMS STATE S 9 20. AD. ED. BD. 1100. 120. 140. 180 PIRS TRUE RIMSPEED IN MNDTS

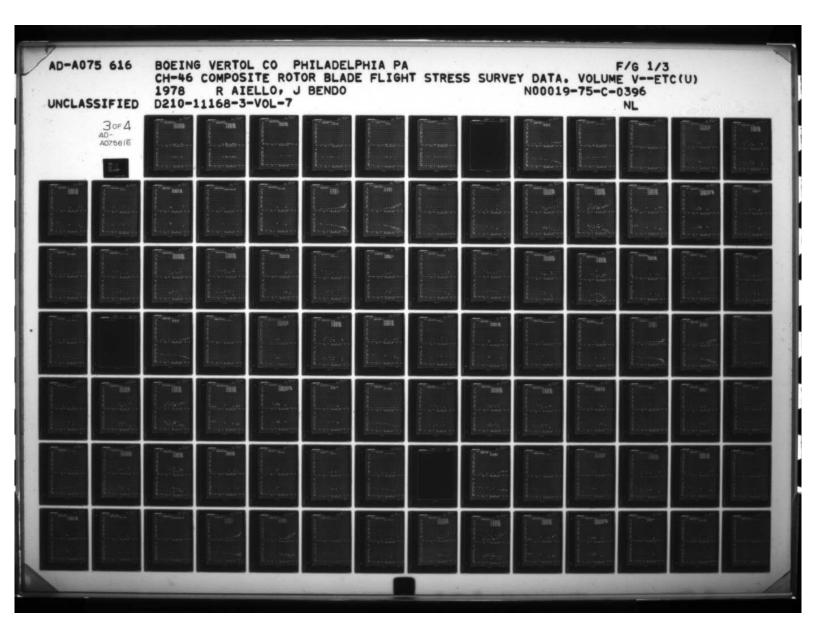
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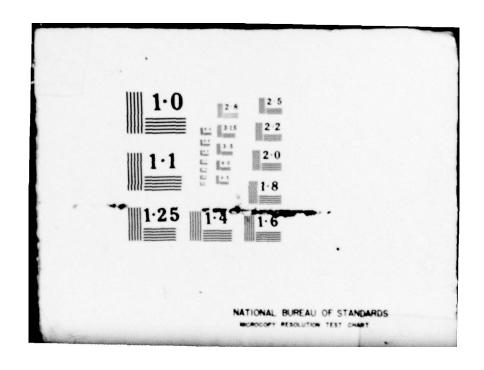
NUMBER

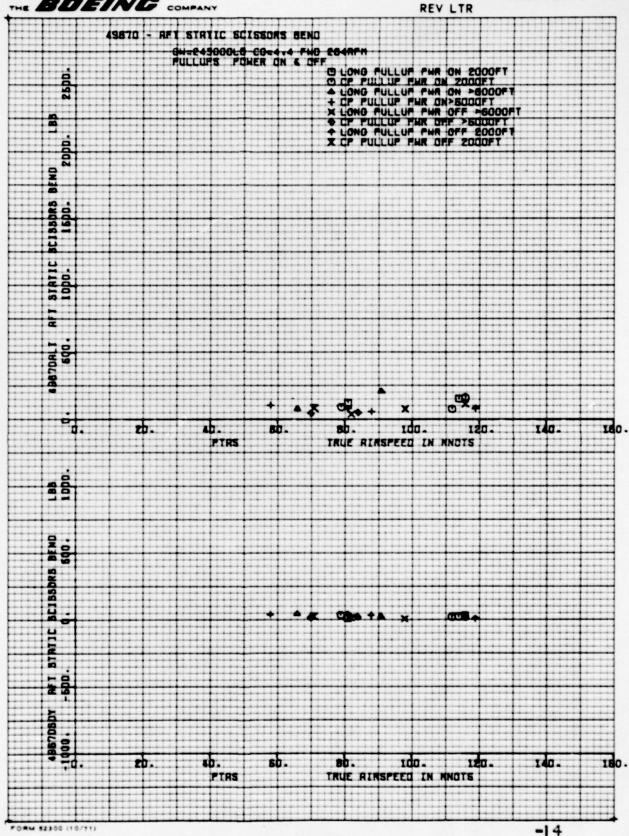
THE BOEING COMPANY

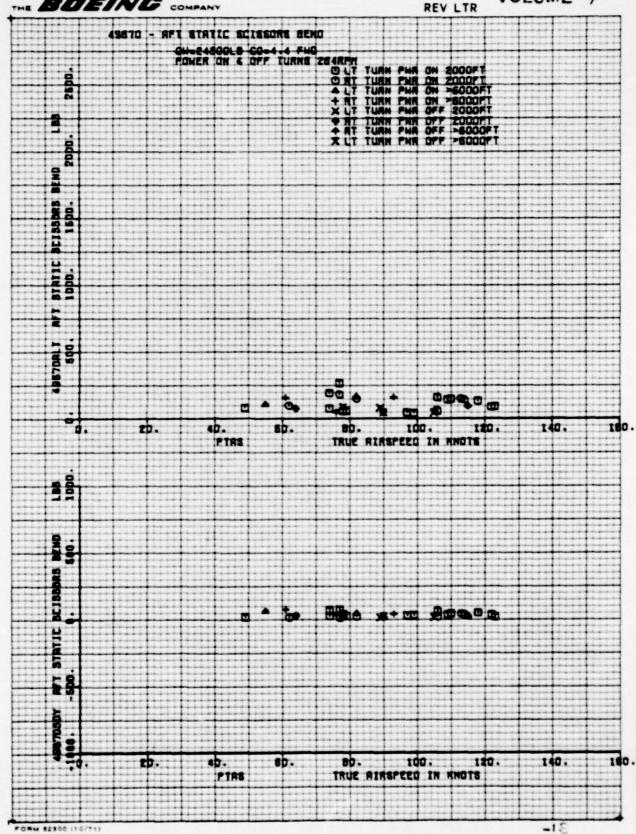
FORM \$2300 (10/71)

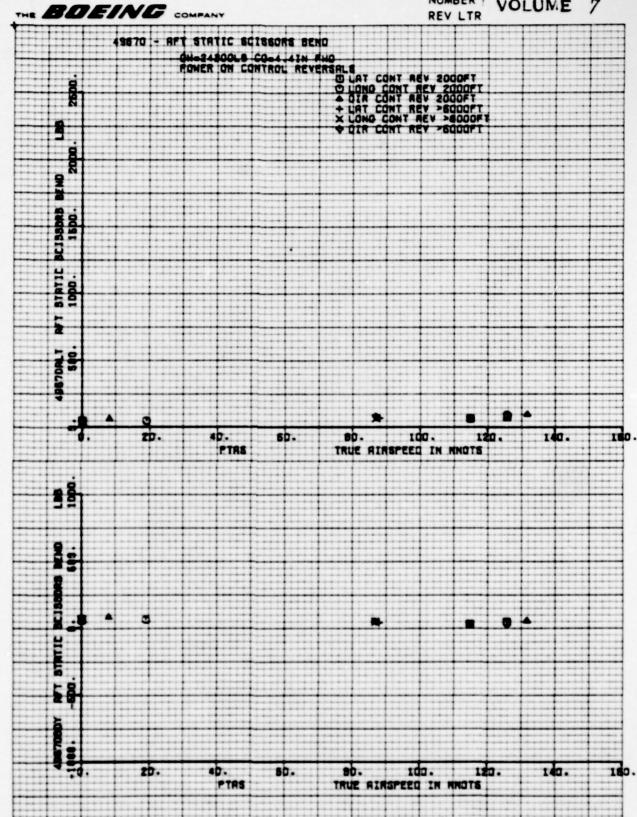
REV LTR AFT STATIC SCISSORS BEND 49670 14 04:2430000 00:4 41N FHO HO=>6000FT 254RPH O FLT 141 LEVEL FUT STATIC SCISSORS BEND 1500. 2000. 10001 . Sqq. D (D) 120. 140. 160 80. FIAS TRUE AIRSPEED IN MNOTS LES BEND - 1 STATIC SCISSORS d. SGG. F. ... \*352050 :1000 80- 100- 120-60. FIRS TRUE RIRSPEED IN KNOTS



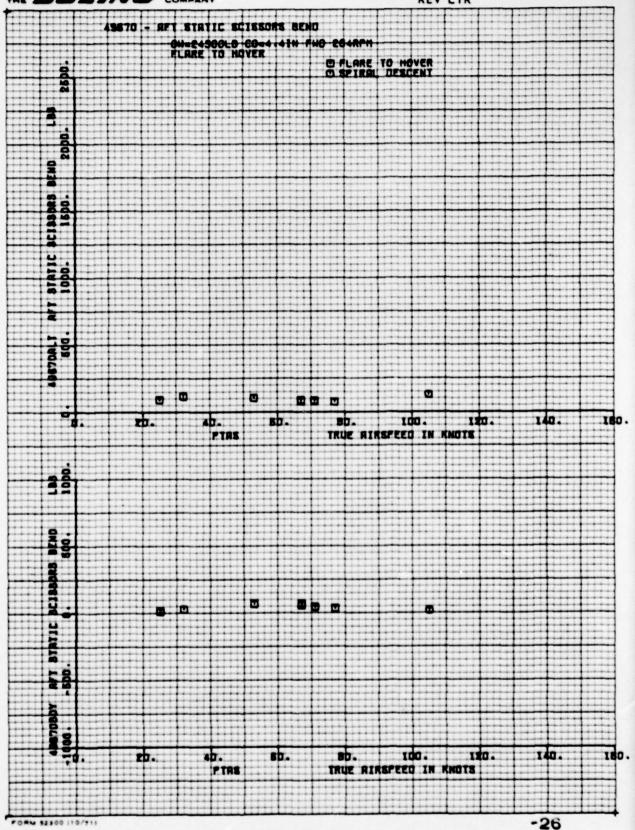






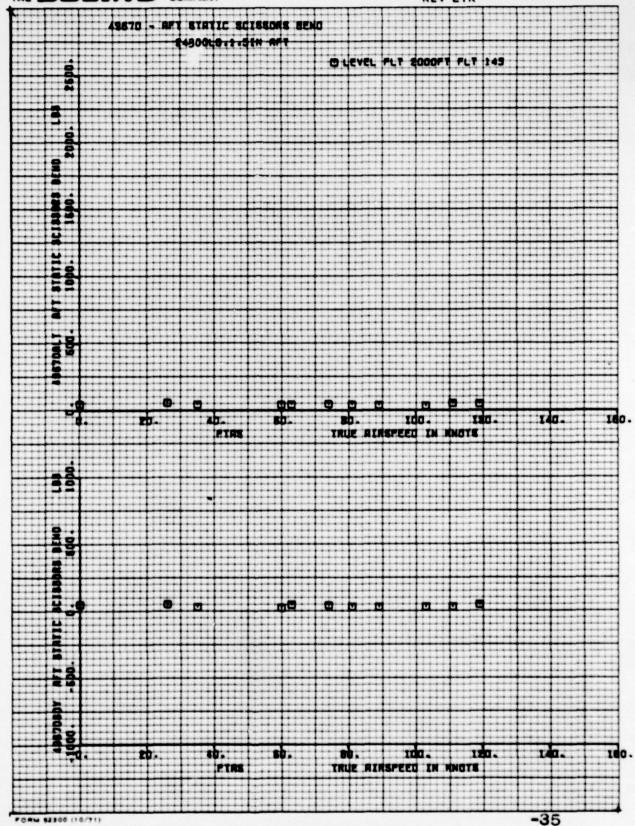


THE BOEING COMPANY



NUMBER REV LTR

A BOEING COMPANY 49670 - RET STRIC SCISSORS SEND OH 24300L8 CO-4 44EN FUB 264RFH O PO SOO FFR 1000 ON 80. IAG. AD. PIRE TRUE RIRSPEED IN MNOTE 20. 4U. 86. | Ida. | TRUE RINSPEED IN MNDTS FIRS FORM \$2300 (10/71) - 30



PREPARED BY: J. Bendo

CHECKED BY: THE BOEING COMPANY DATE: 8/28/78

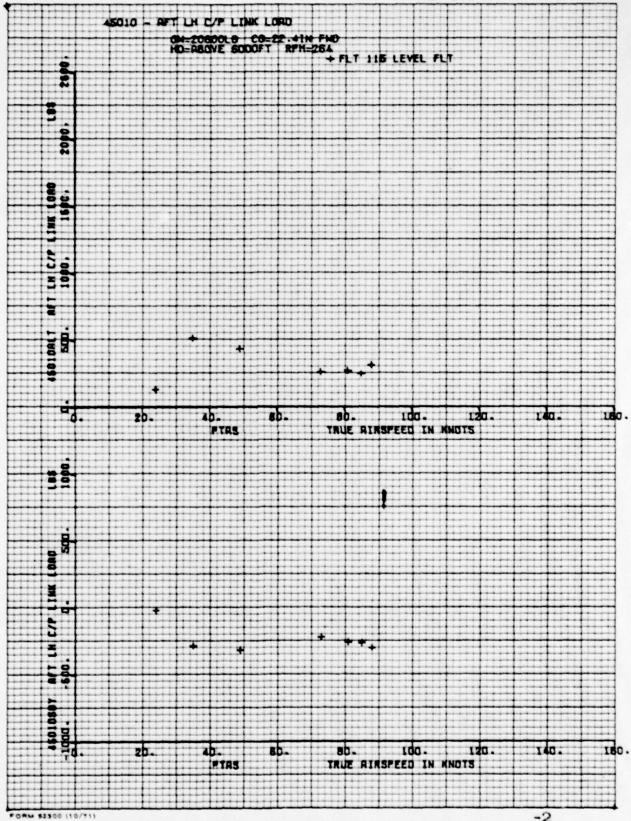
NUMBER D210-11168-3 REVLTR Volume 7 MODEL NO.

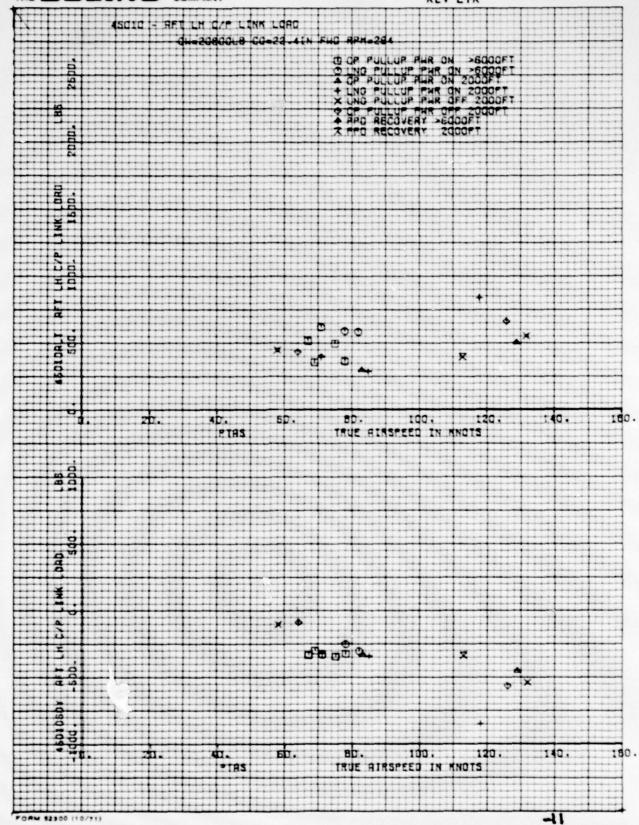
4.6 Aft L.H. C/P Link

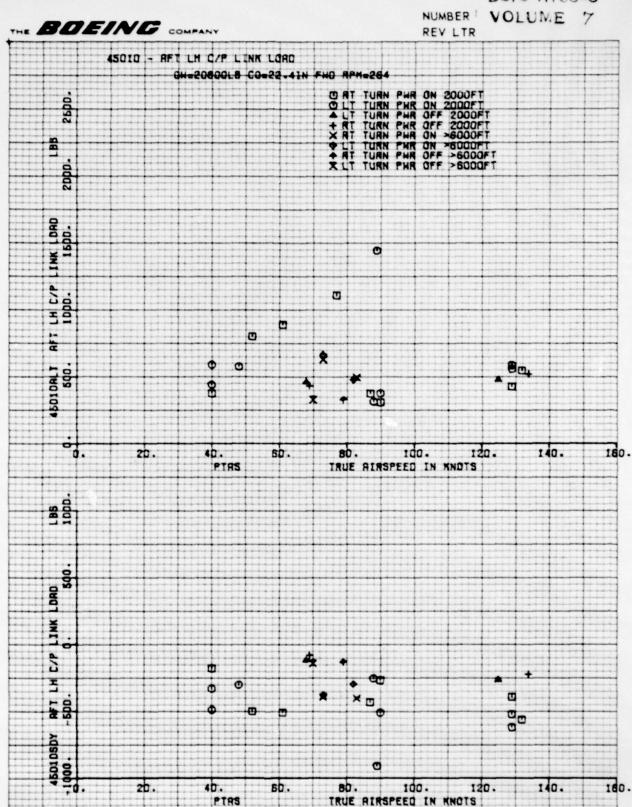
THE BOEING COMPANY REV LTR 48010 - APT LH C/P LENK LORG 44-50600LB C0-55-42H FHO BALT IN LVE FLY 0 0 0 0000 0 0 0 U ob. 100. 120. TRUE RIMOTEED IN MNOTE 10. FTRE ij **B C** 0 0 0 0 p 80. 100. 120. 140. 180. TRUE RIRSPEED IN HOUTE PTRE

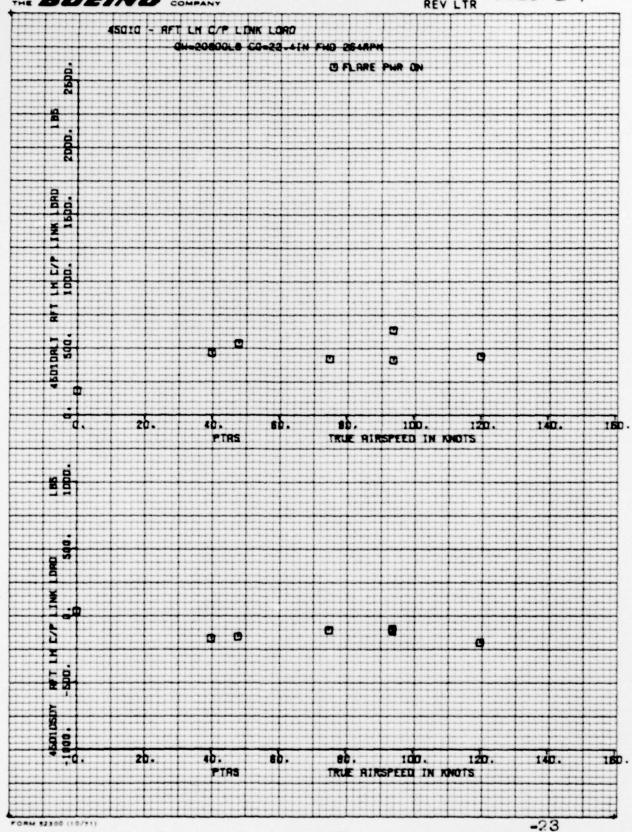
SHEET 199

D210-11168-3



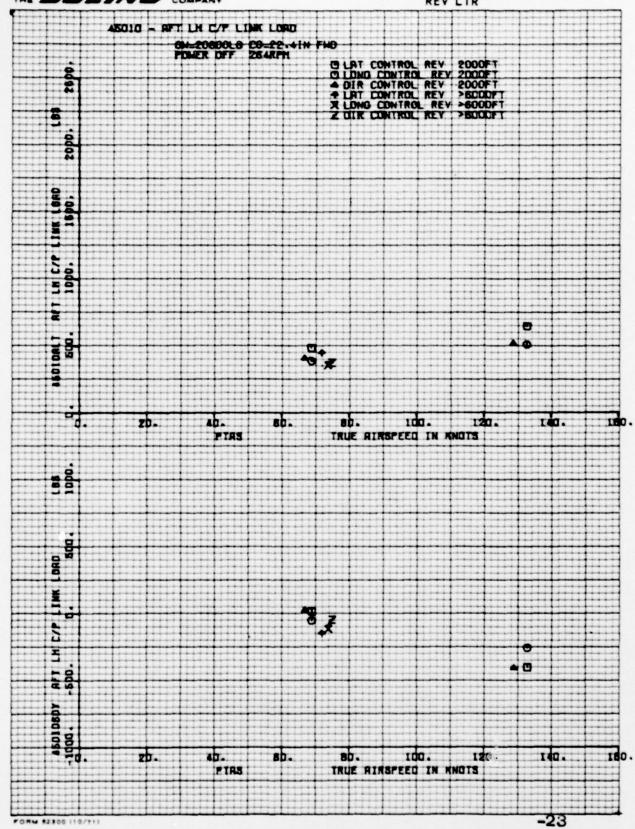






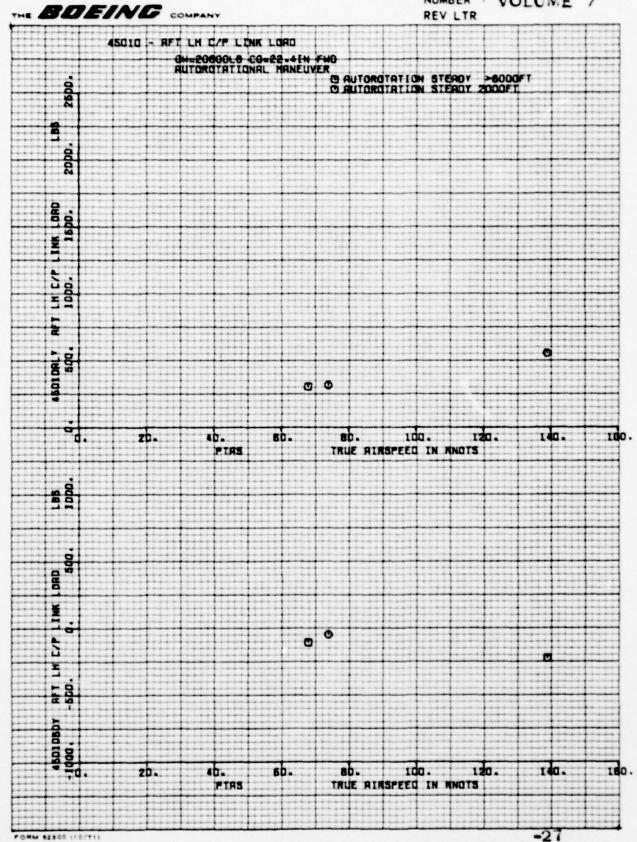
THE BOEING COMPANY

NUMBER ! VOLUME 7 REV LTR

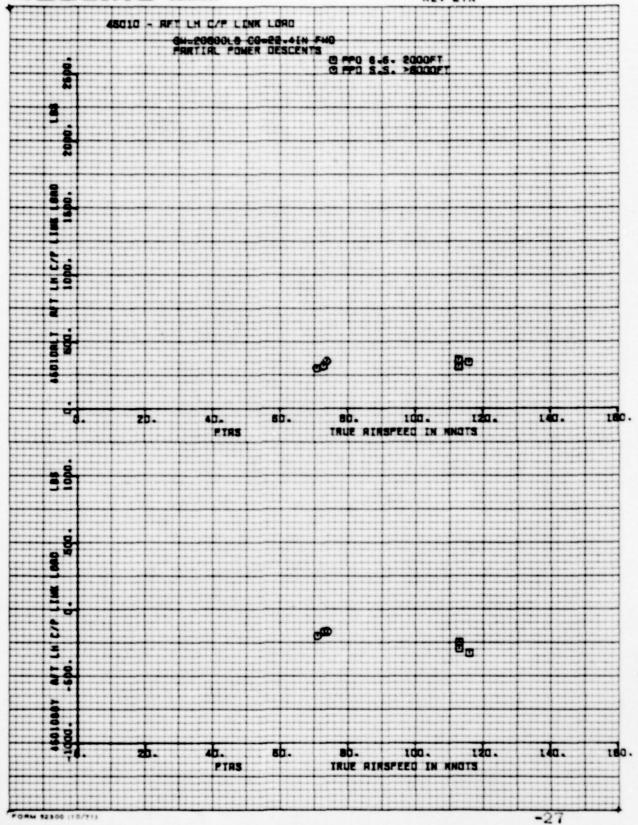


NUMBER ! VOLUME 7

REV LTR



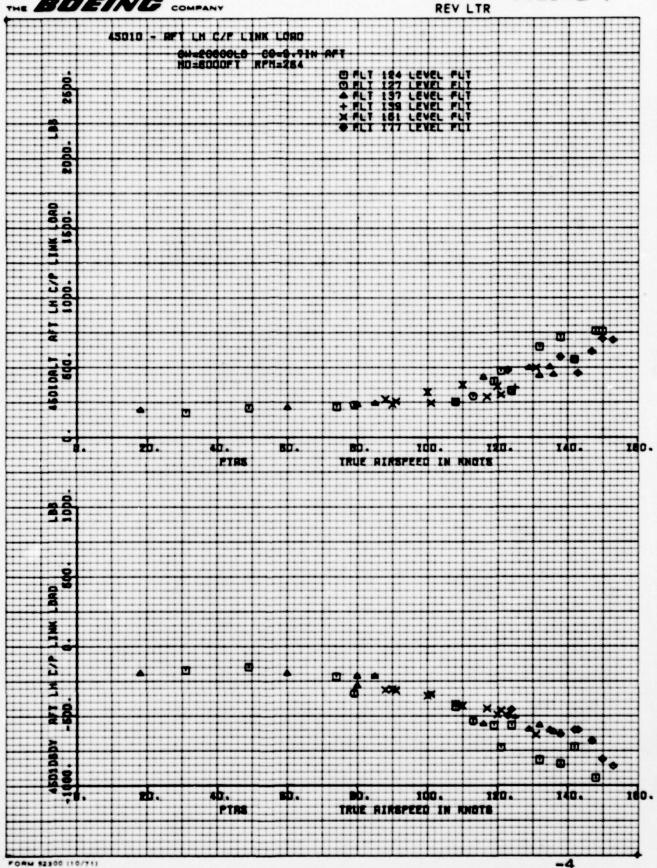
NUMBER VOLUME REV LTR



SHEET 208

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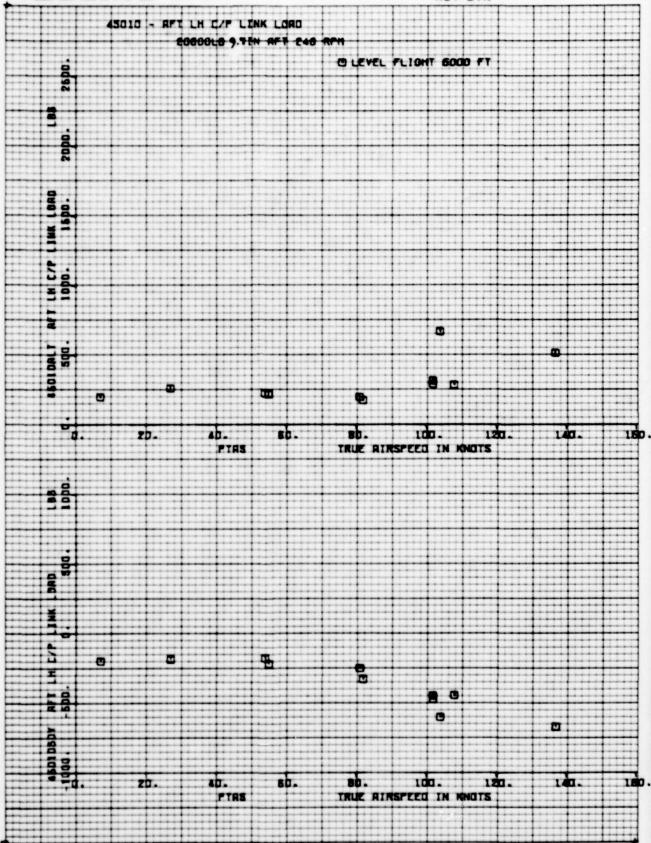
NUMBER



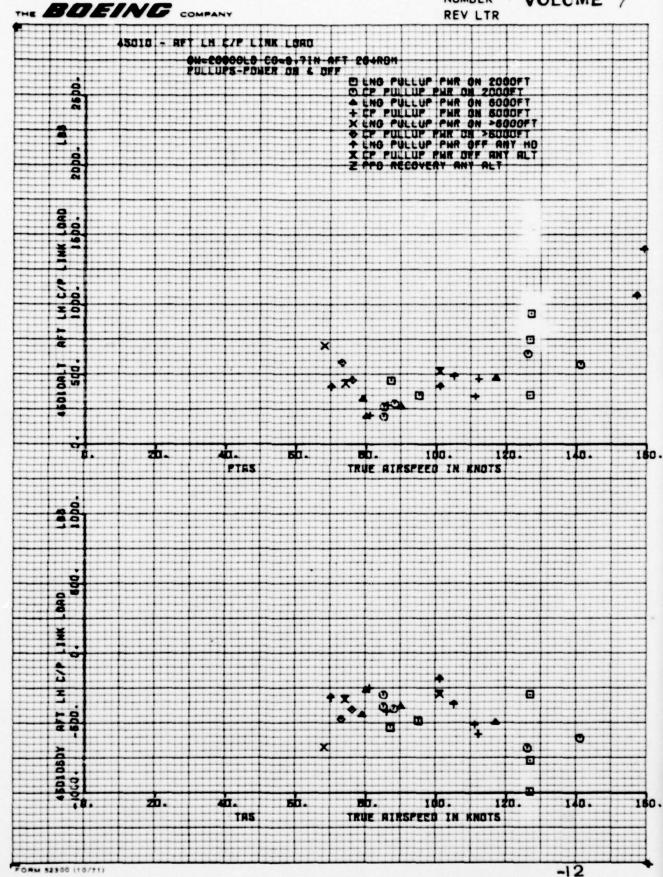
NUMBER VOLUME 7 THE BOEING COMPANY REV LTR 45010 - AFT LH CZP LINK LOAD 40=2000005 RPH-264 DALT 124 LEVEL FUT BD- 100- 120-TRUE AIRSPEED IN ANDTS PTAS 80- 100- 120-50. 140-AD. 160 PIRS TRUE RINSPEED IN KNOTS FORM \$2300 (10/71)

D210-11168-3

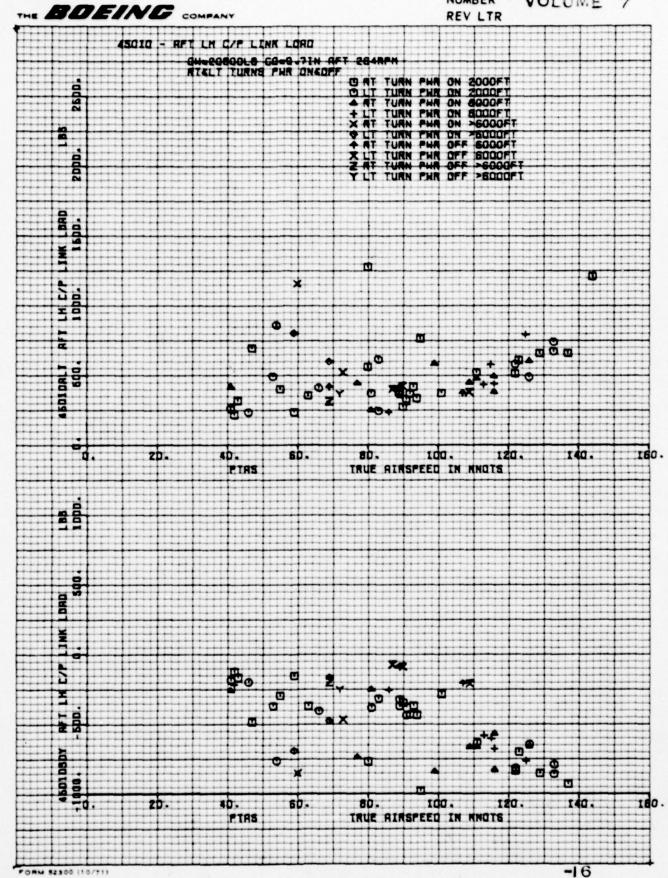
-10



NUMBER REV LTR



VOLUME 7 NUMBER



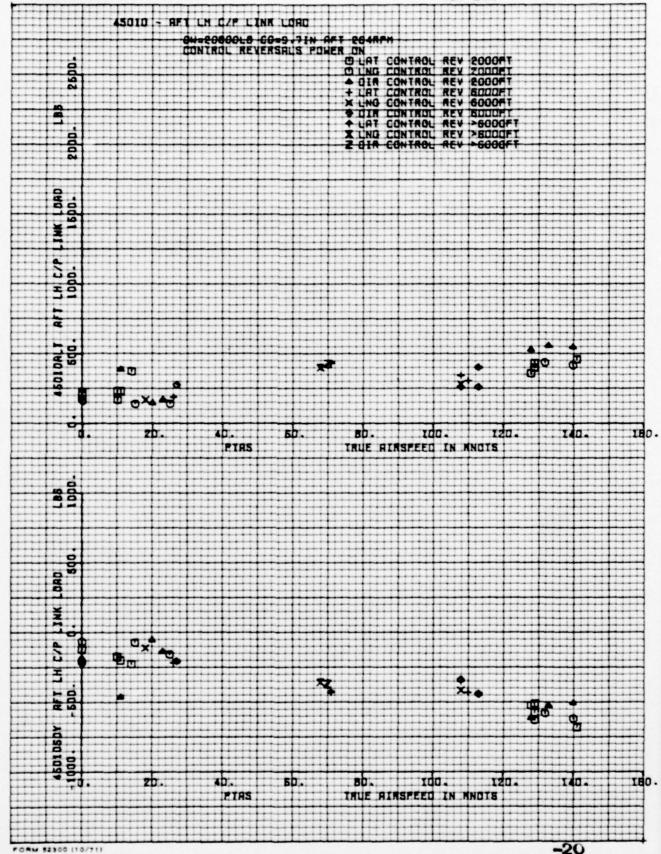
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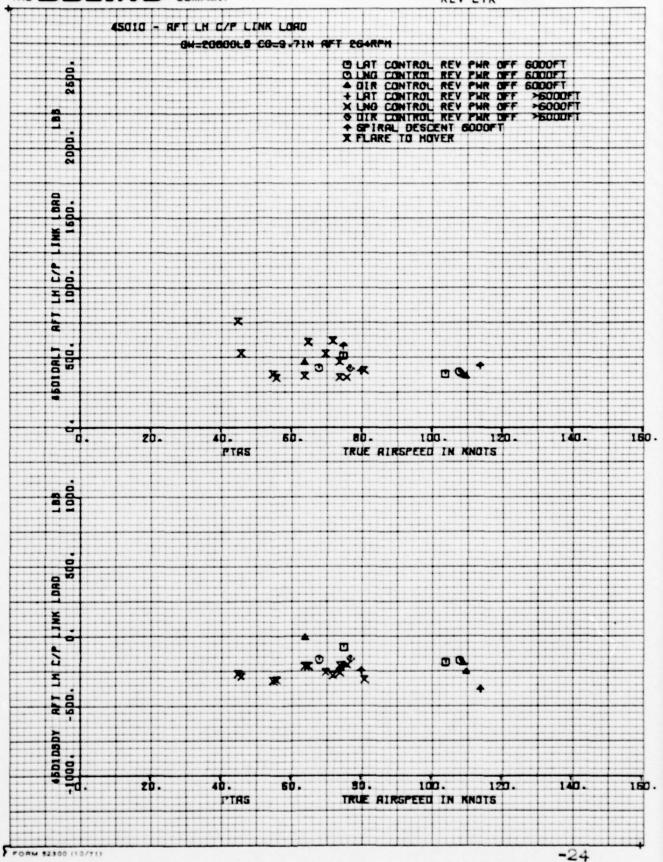
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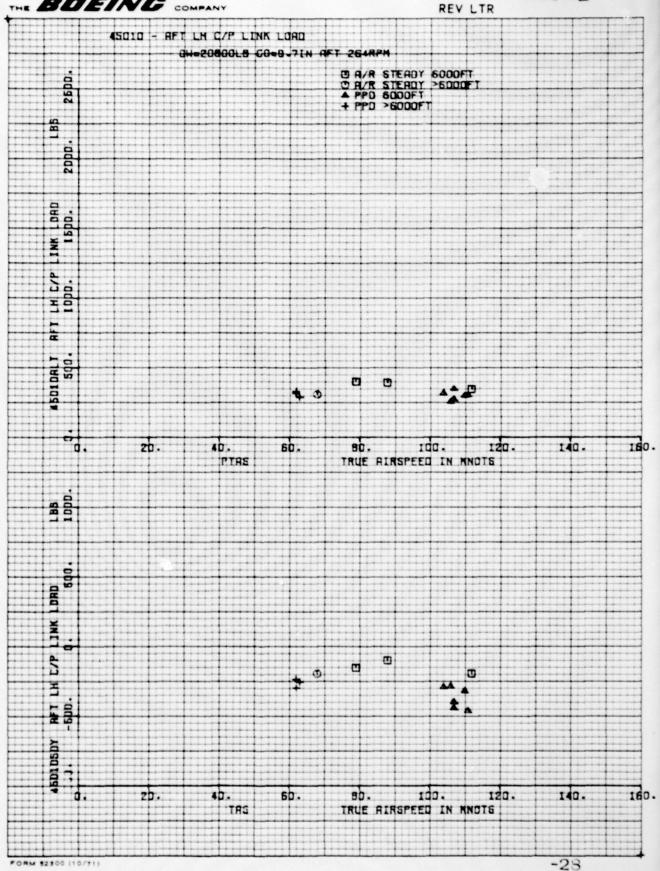
NUMBER VOLUME 7

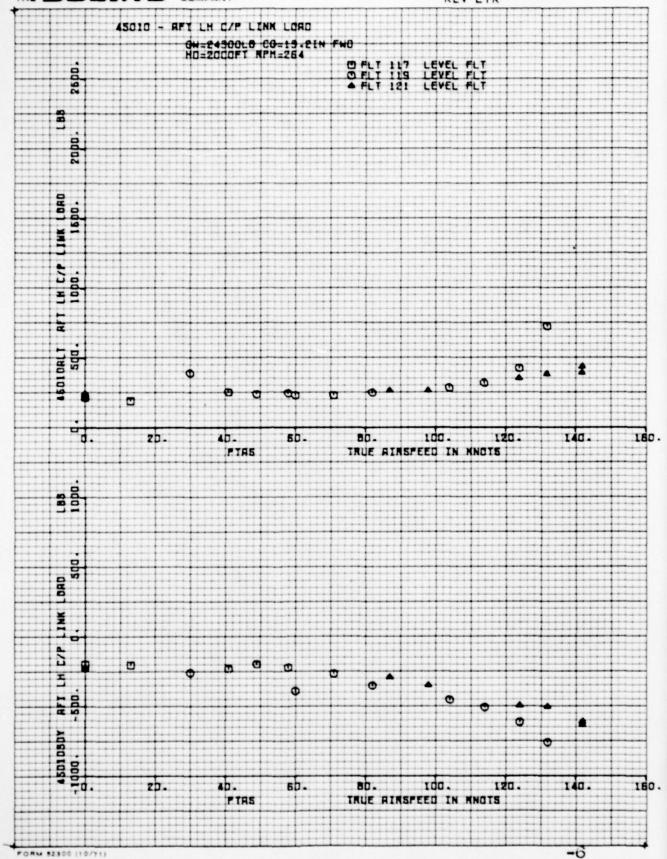
THE BOEING COMPANY

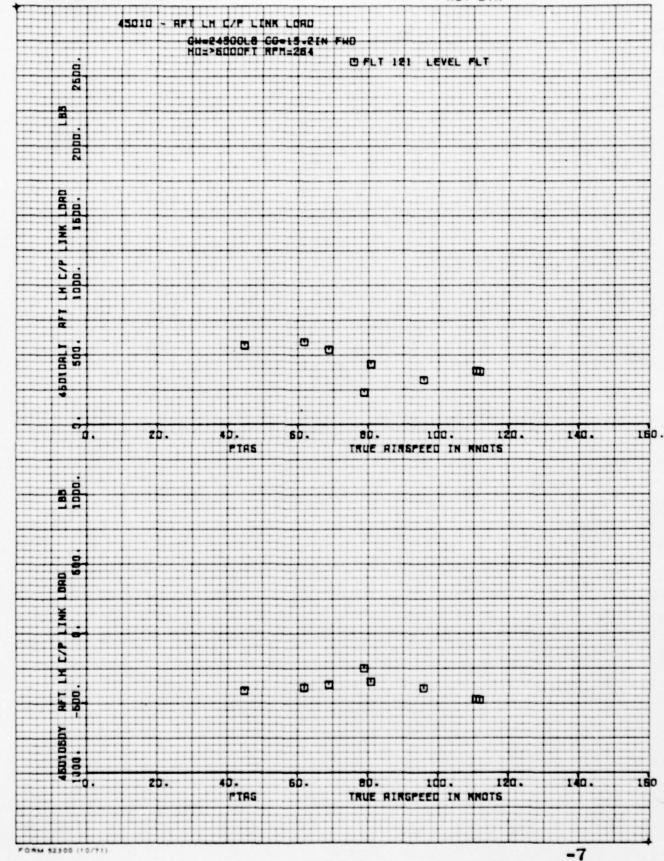




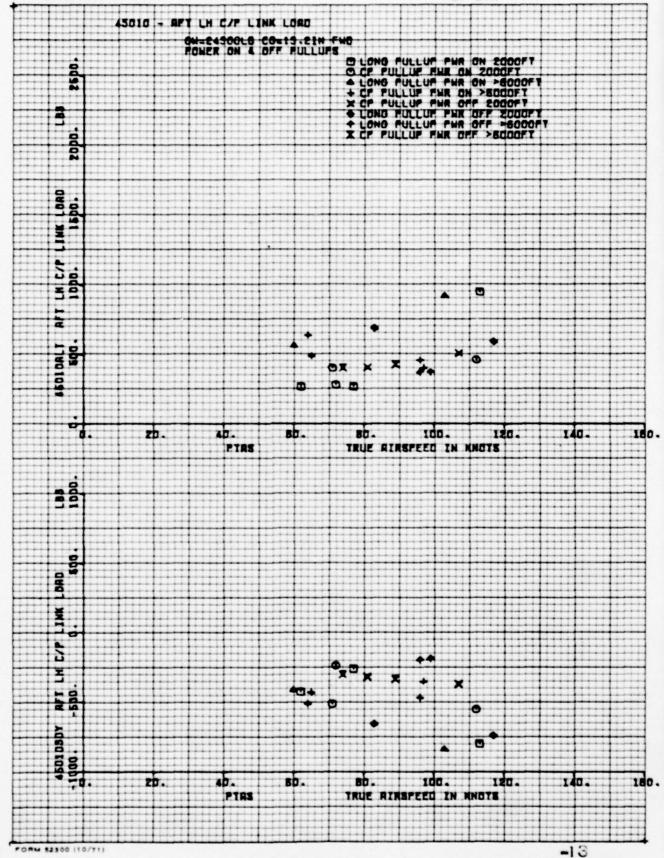
NUMBER







REV LTR



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SHEET 220

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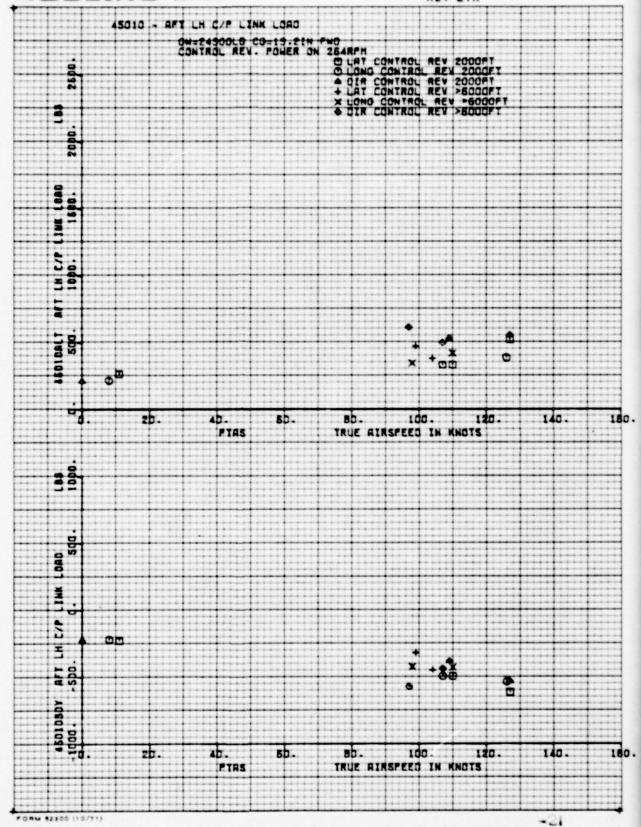
TRUE AIRSPEED IN KNOTS

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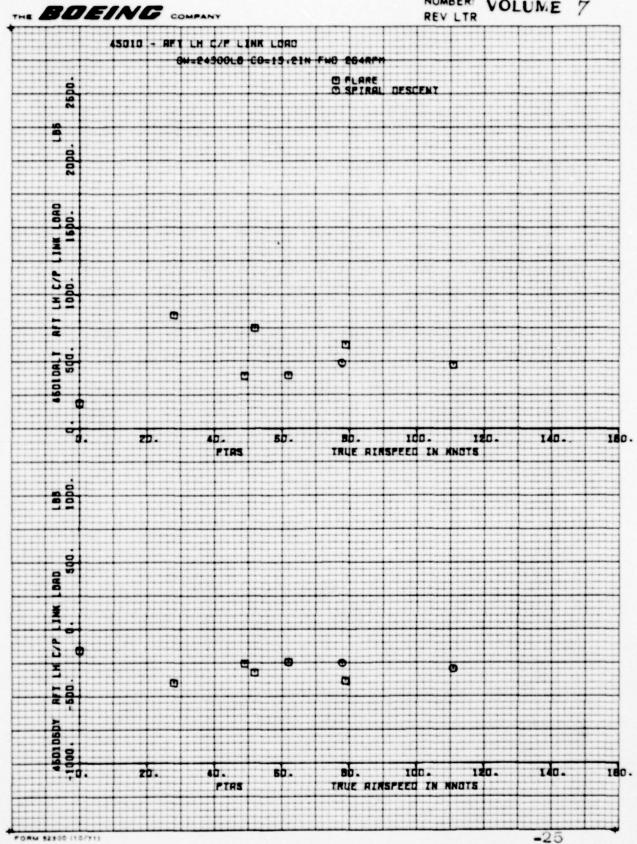
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FORM \$2300 (10/71)

PTRS

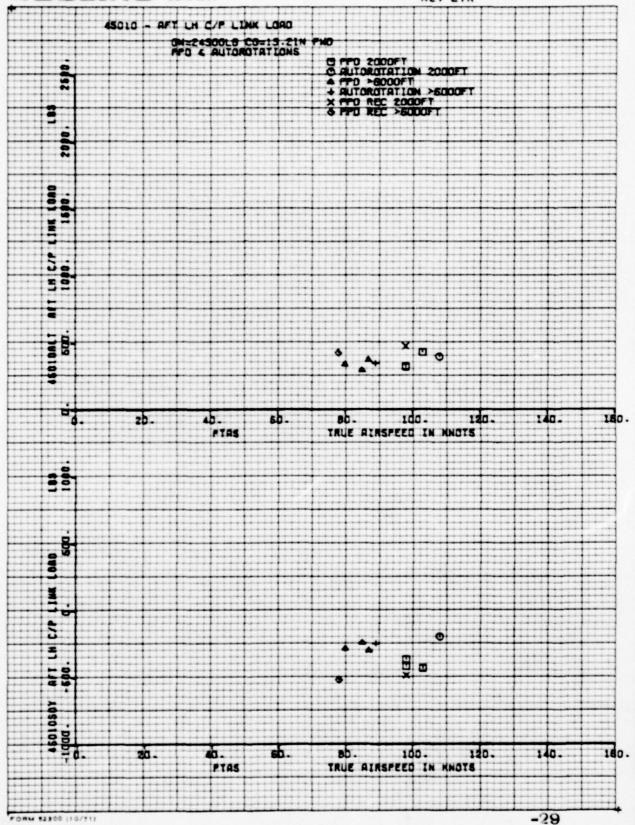


D210-11168-3 NUMBERI VOLUME 7



HE BOEING COMPANY

NUMBER ' VOLUME 7



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160.

ıda.

TRUE RIRSPEED IN MNOTS

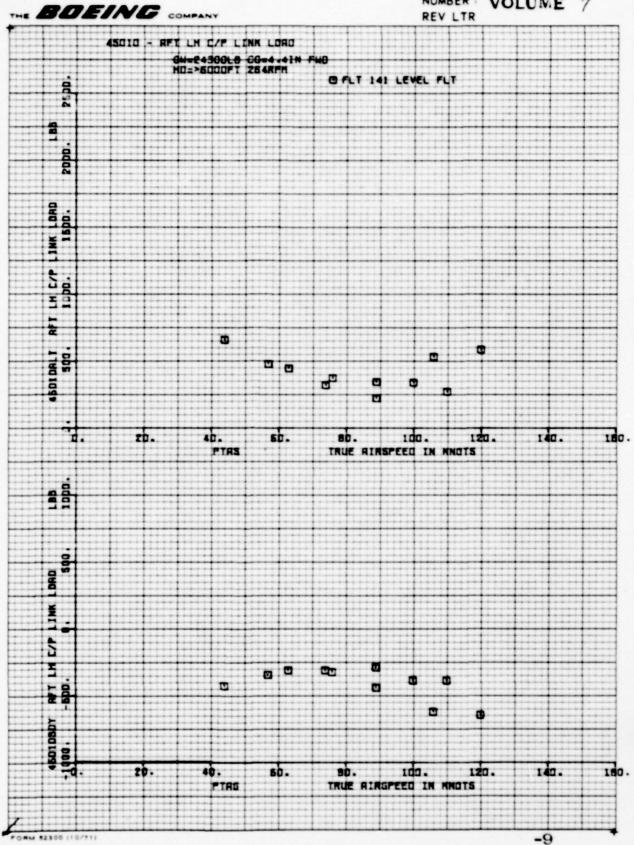
45010 - RFT LH C/F LINK LORD GW 24500LB CO=4.4EN FWO HD=2000FT RFH=264 OFLT 140 LEVEL FUT LH C/P 80. 1da. 12a. TRUE RIRSPEED IN MNOTS PIRS 

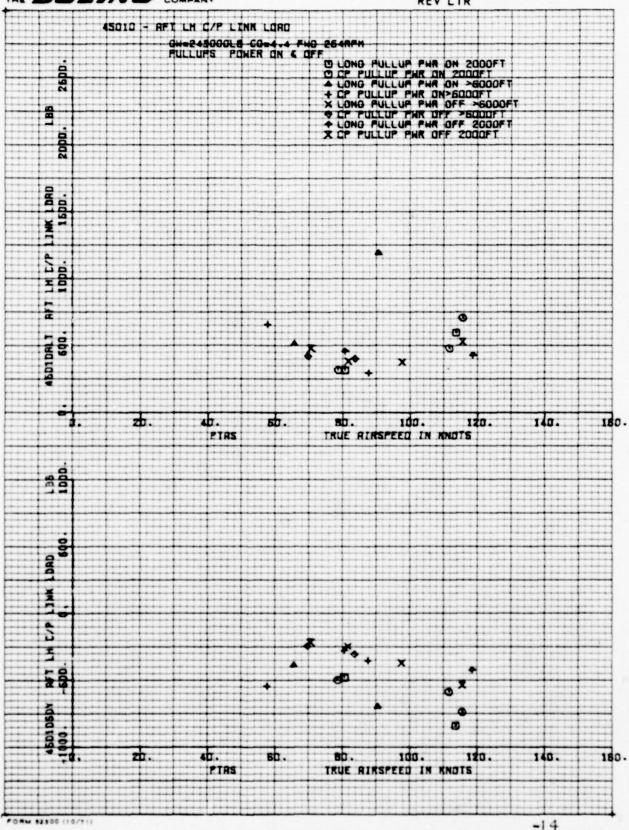
FORM \$2300 (10/71)

SHEET 224

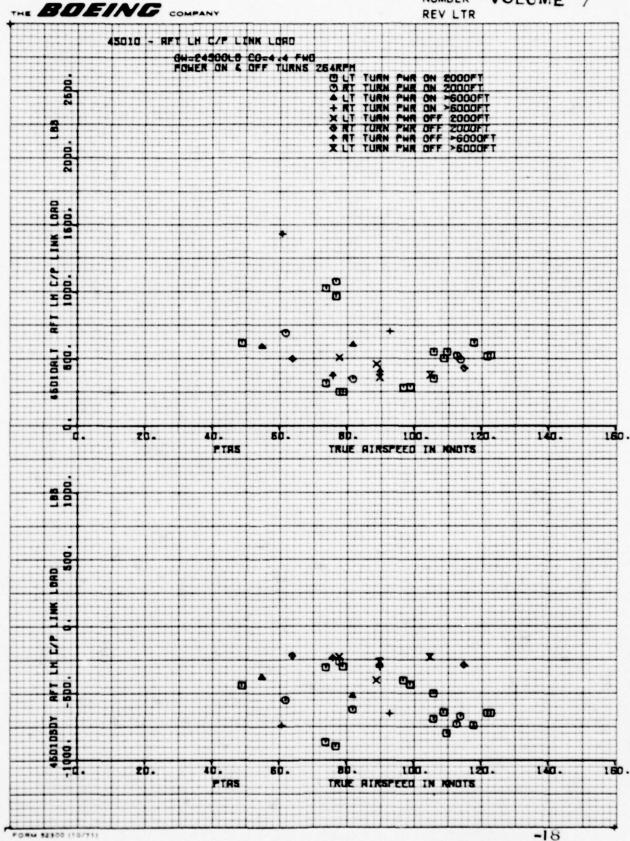
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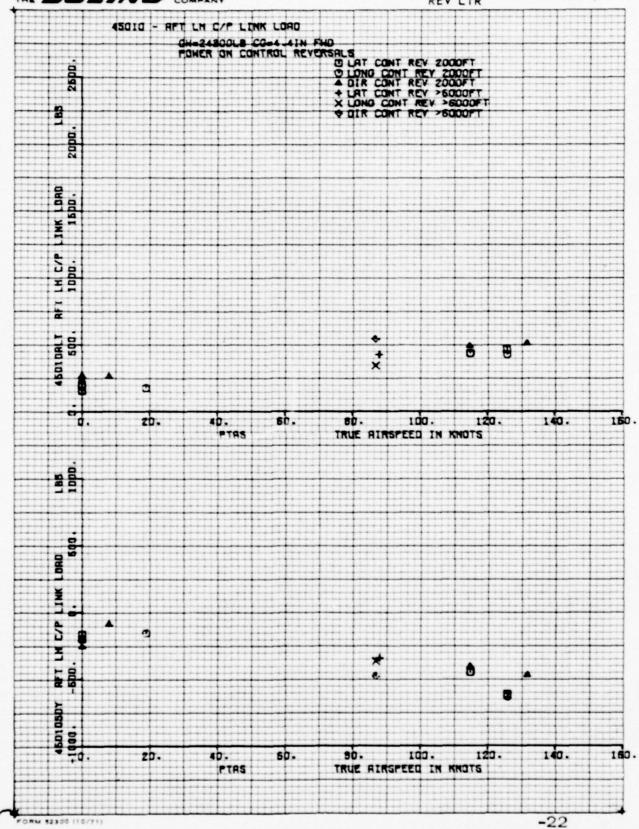
NUMBER! VOLUME 7 REV LTR

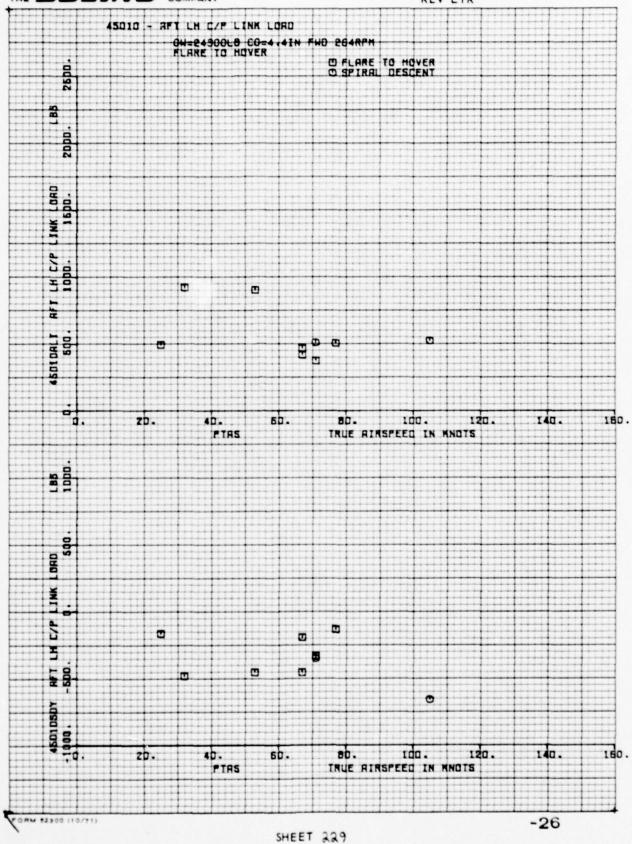




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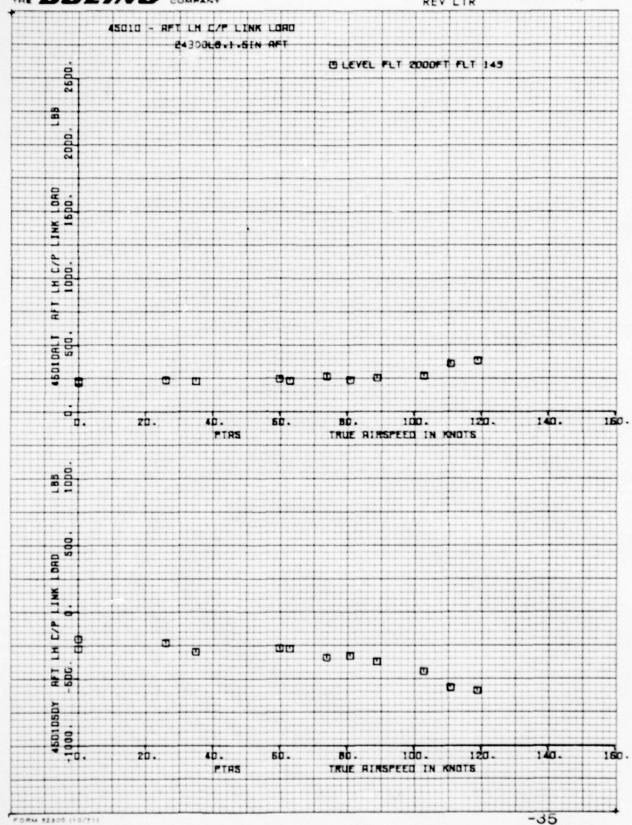






NUMBER VOLUME 7

THE BOEING COMPANY REV LTR 45010 - RET LH C/P LINK LORD OH 24300LB CO=4.4[N FHD 264RPM E PPO 500 FPM O R/R STERDY 1.85 LINK LDRD 1600. AFT LH C/P. 10p0. 45010ALT 6qu. 0 0 0 100. 140. 180. AD. ZD. 50. 120. TRUE AIRSPEED IN MNOTS 0 0 -500. 0 4501050Y 140. 160. 100. 20. 40. TRUE AIRSPEED IN KNOTS PTAS -30 FORM \$2300 (10/71)



PREPARED BY:

J. Bendo

NUMBER D210-11168-3 REVLTR Volume 7

MODEL NO.

THE BOEING COMPANY DATE:

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CHECKED BY:

8/28/78

4.7 Aft R.H. C/P Link

SHEET 233

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Ida.

TRUE RIRSPEED IN KNOWS

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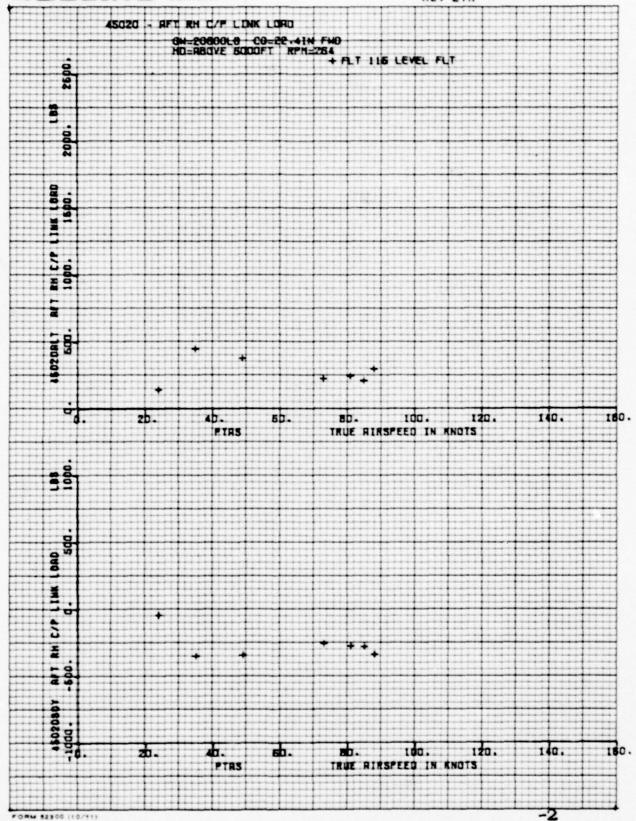
180.

50.

AD.

PIRE

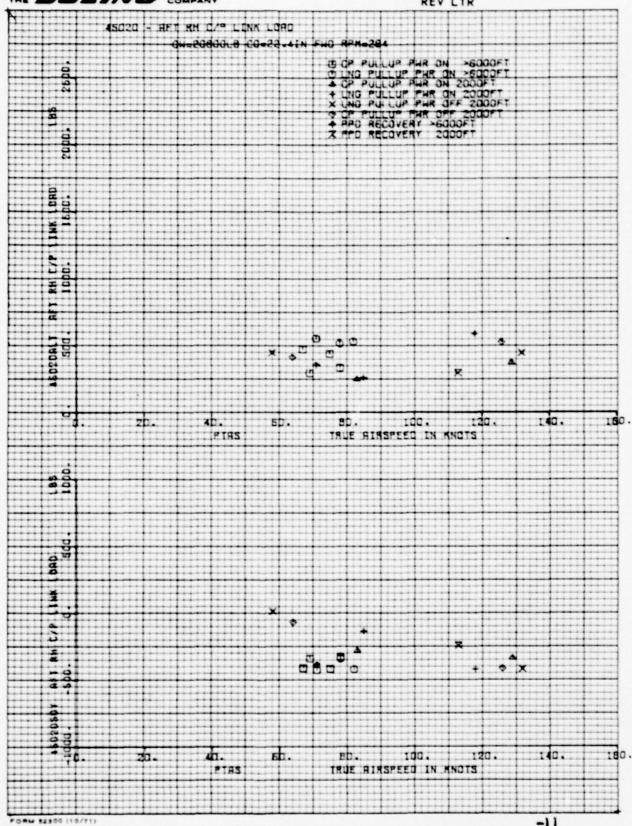
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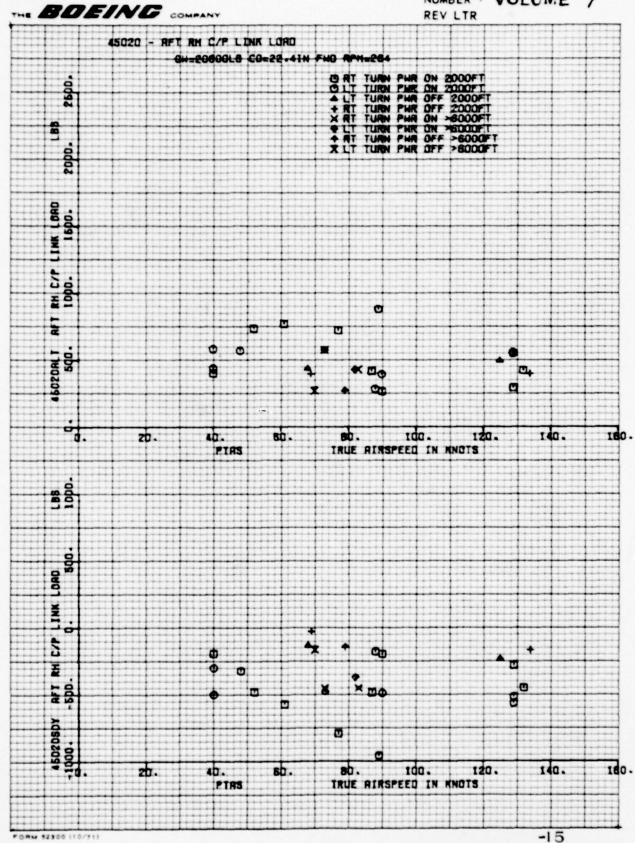


SHEET 234

NUMBER VOLUME 7

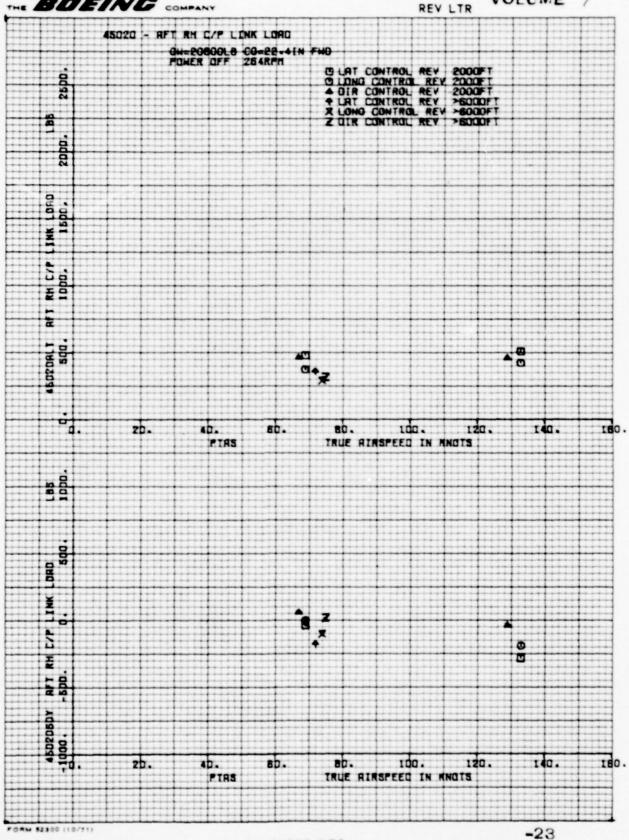




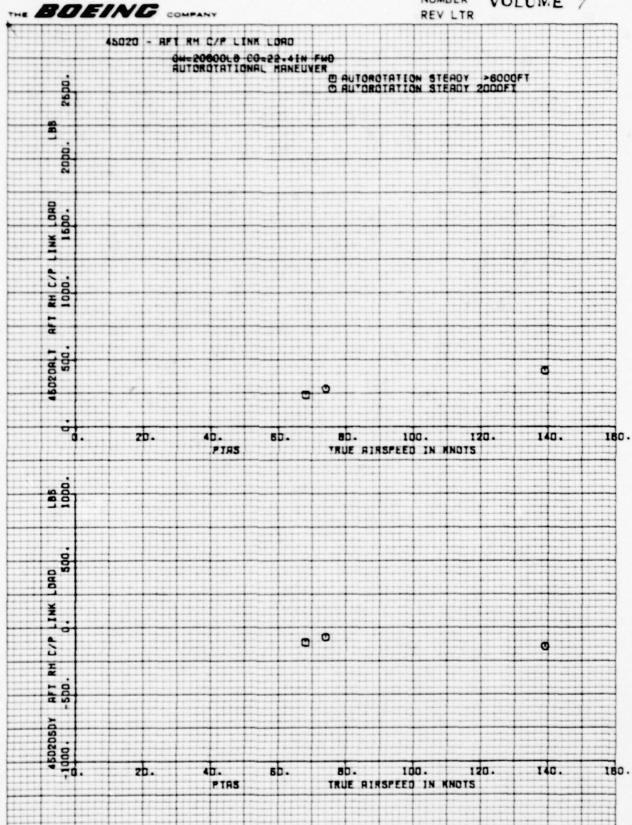


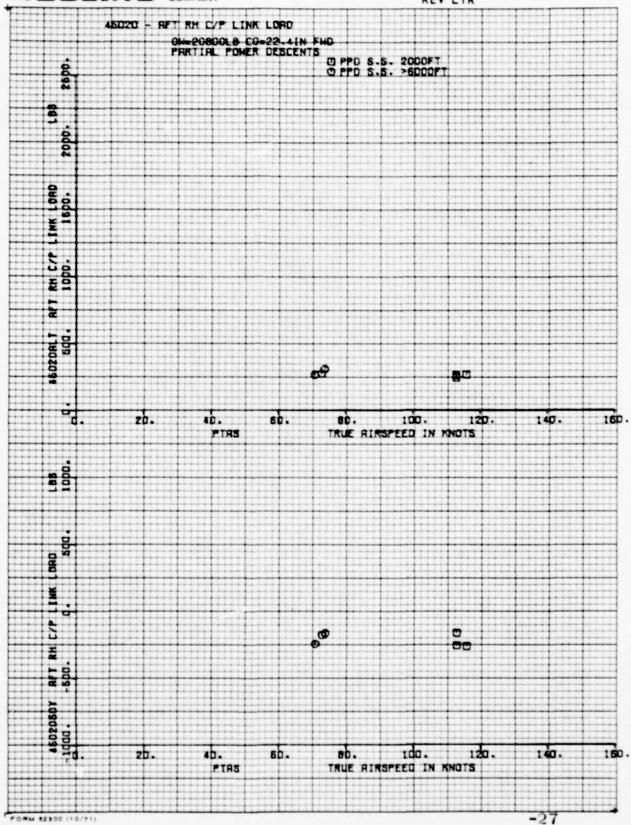
D210-11168-3

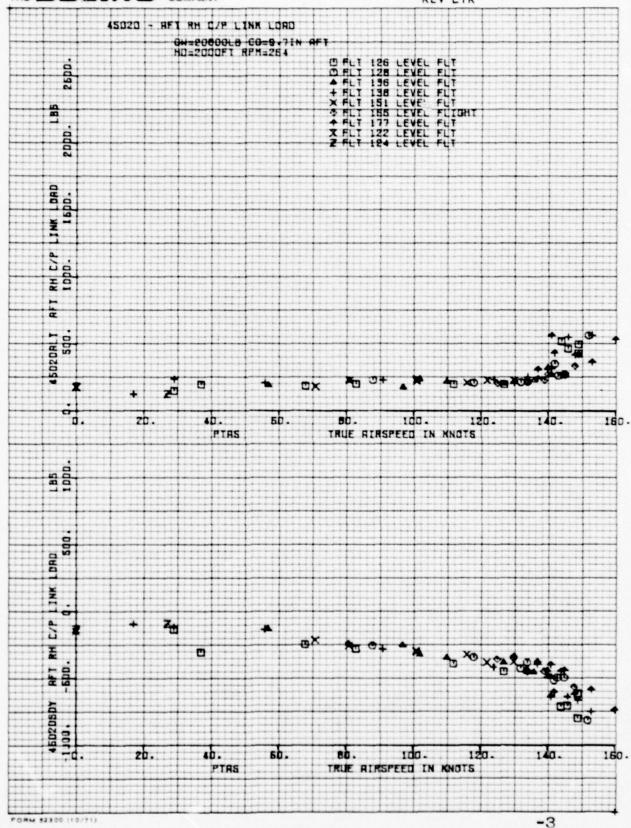
THE BOEING COMPANY REV LTR 45020 - AFT RH CZP LINK LORD QH-20000L8 CO-22.4[N FHO 264RPH O FLARE PHR ON 0 0 20. 4D. 80. 100. 140. 80. 180. FIRS TRUE RINSPEED IN KNOTS 60. 80. 100. 180. 40. FIRS TRUE RINSPEED IN MNOTS -23



-27

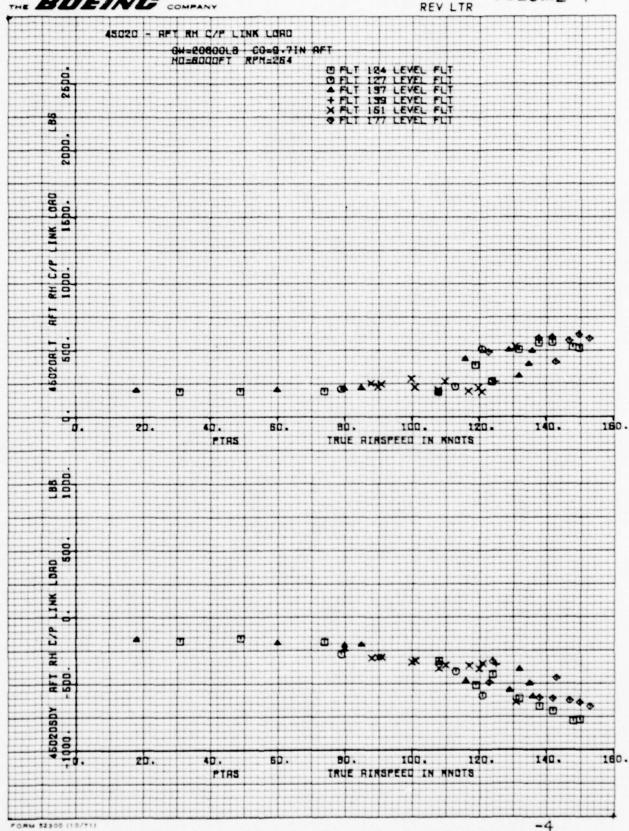


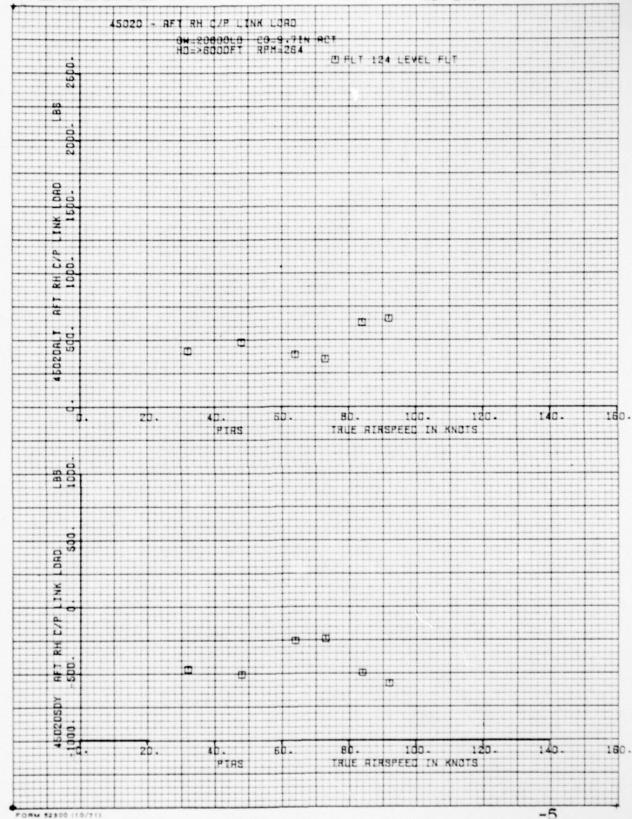




SHEET 242

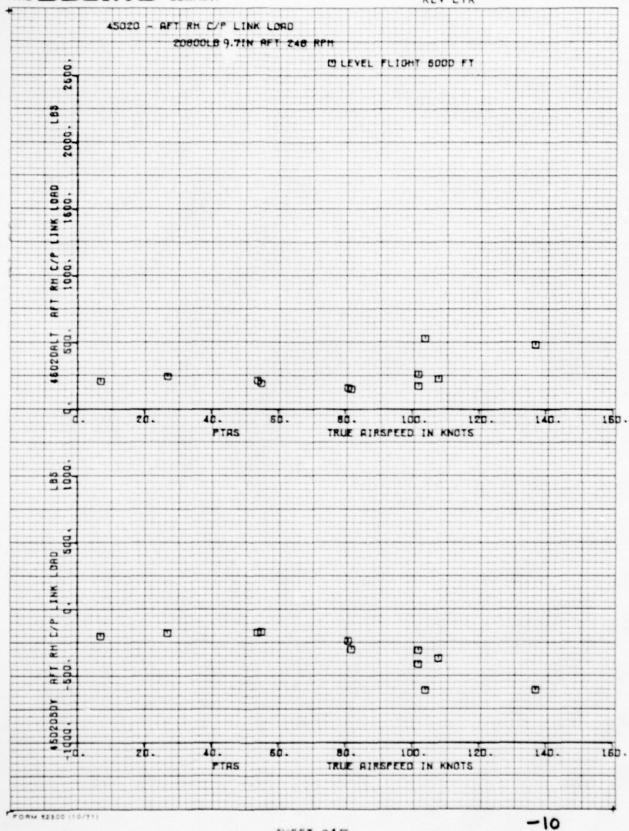
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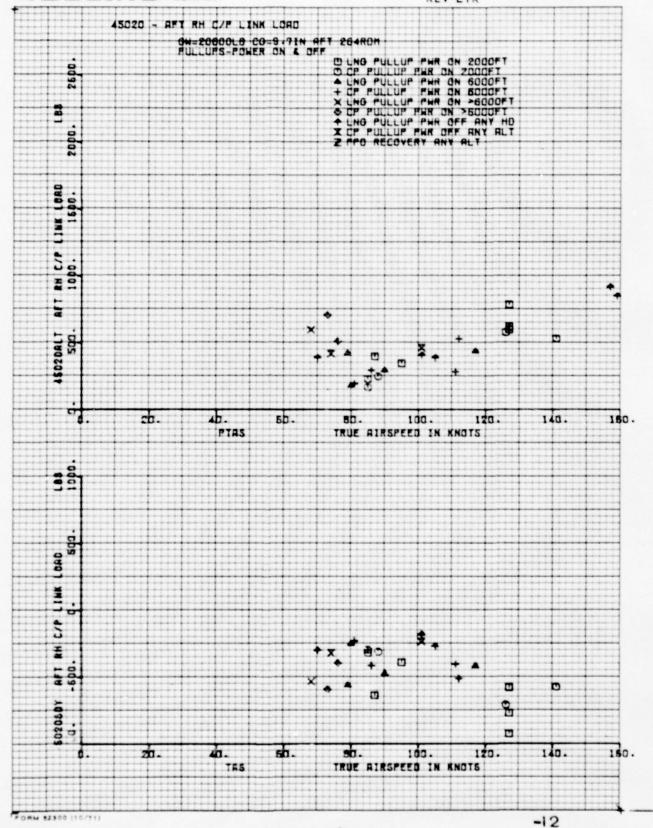
SHEET 244

10



NUMBER! VOLUME 7

THE BOEING COMPANY



-16

BOEING COMPANY REV LTR 45020 - AFT RH C/P LINK LORD CH-20000L8 CO-9 7IN AFT 264RPH RTELT TURNS PHR CNEORF © AT TURN PHR ON 2000FT
© LIT TURN PHR ON 2000FT
ART TURN PHR ON 6000FT
+ LIT TURN PHR ON 6000FT
X AT TURN PHR ON 6000FT S LT TURN PHR DN SBUDGET ATT TURN PHR DFF 6000FT X LT TURN PHR DFF 6000FT Z AT TURN PHR DFF >6000FT Y LT TURN PHR DFF >6000FT Y LT TURN PHR DFF >6000FT ZDDD. 1 SDD. RH C/P 0 0 0 60. ZD. AD. 80. 100. PIRS TRUE RIRSPEED IN KNOTS 100 EVP 0 0 80. ida. 140. ZD. 4D. TRUE AIRSPEED IN KNOTS PTAS

FORM \$2300 (10/71)

-20

NUMBER REV LTR

THE BOEING COMPANY 45020 - RET RH CZP LINK LORD CONTROL REVERSELS POHER ON R ON

SURT CONTROL REV 2000FT

OLNG CONTROL REV 2000FT

A DIR CONTROL REV 2000FT

+ LAT CONTROL REV 6000FT

X LNO CONTROL REV 6000FT

OTHER CONTROL REV 5000FT

A LAT CONTROL REV 5000FT

X LNO CONTROL REV 5000FT

X LNO CONTROL REV 5000FT

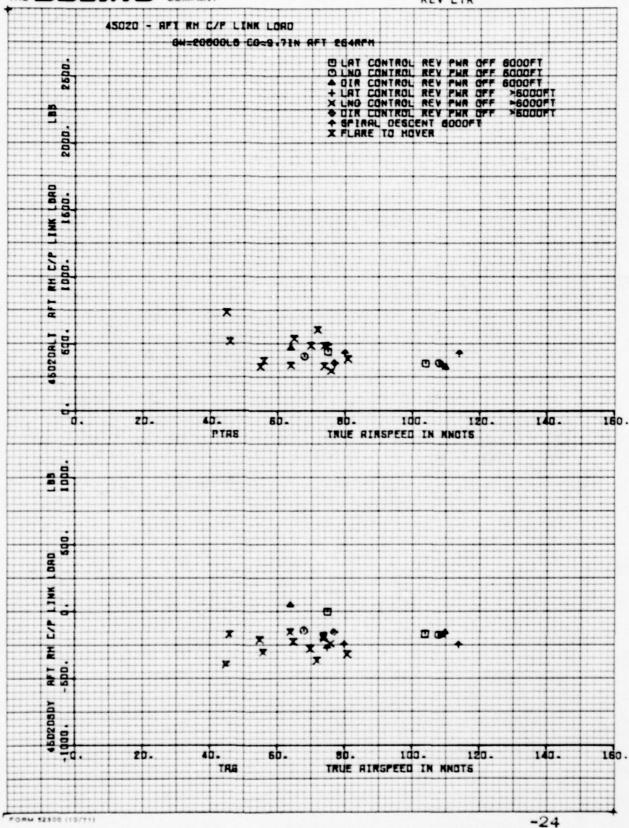
X LNO CONTROL REV 5000FT

Z DIR CONTROL REV 5000FT LINK LORO 1600. m ox 8b. 1da. 12a. Ab. 5D. PIRS TRUE RIRSPEED IN KNOTS 1000 Ox A ida. ab. 60. 140. TEO. TRUE RIRSPEED IN KNOTS PIRS

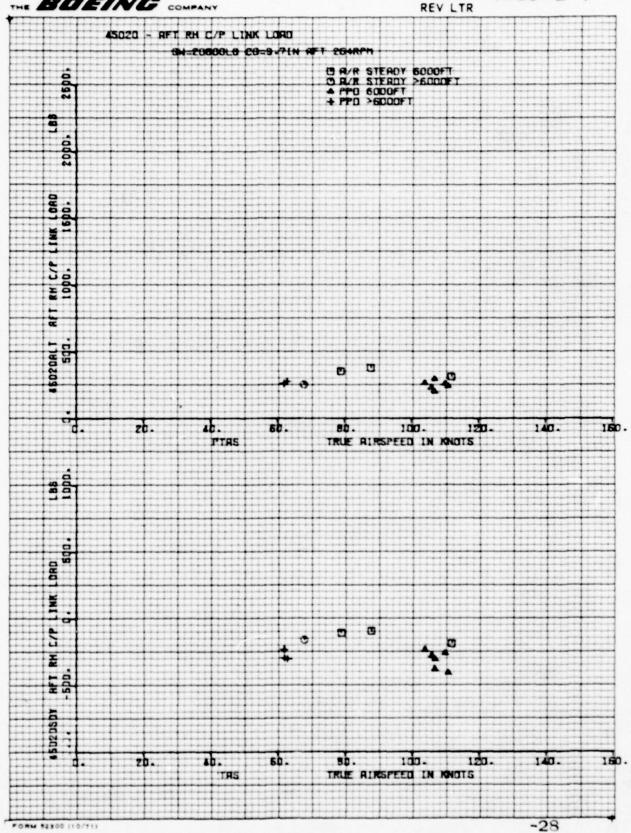
FORM \$2300 (10/71)

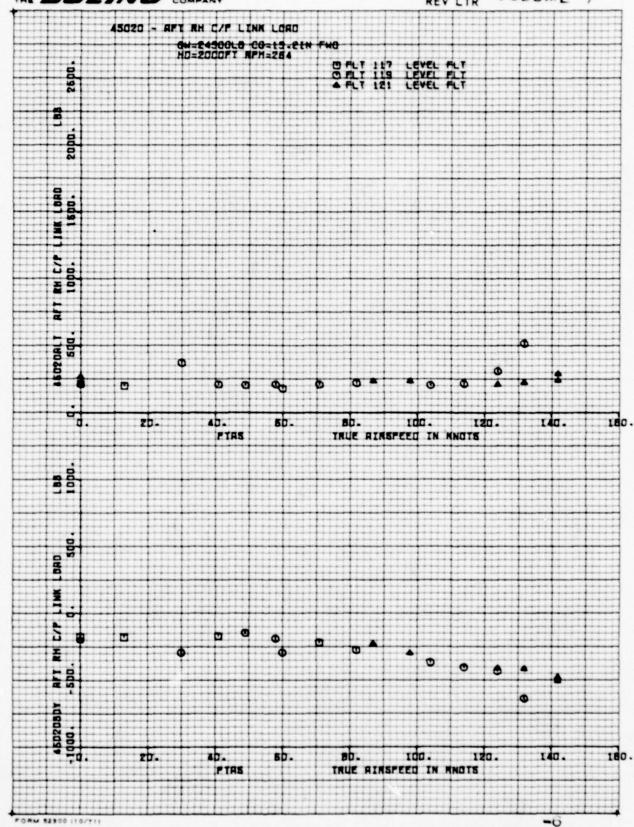
NUMBER | VOLUME 7

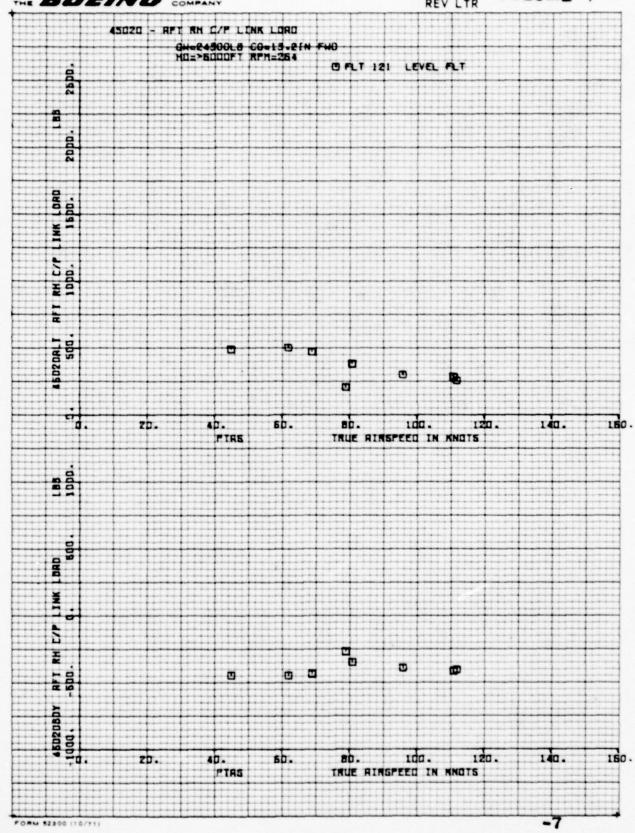








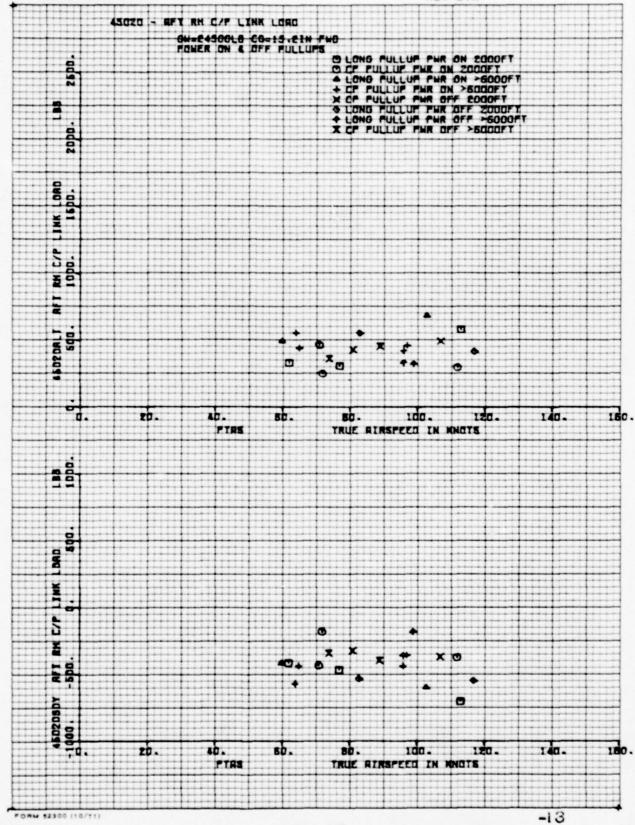




VOLUME 7 NUMBER

THE BOEING COMPANY

REV LTR



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NUMBER VOLUME 7

THE BOEING COMPANY REV LTR 45020 - RFT RH C/F LINK LORO TURNS POWER ON COFF 254RPM ARPH
O LT TURN PHR ON 2000FT
C RT TURN PHR ON 2000FT
ART TURN PHR ON >6000FT
+ LT TURN PHR ON >6000FT
X LT TURN PHR OFF 2000FT
O RT TURN PHR OFF 2000FT
+ LT TURN PHR OFF >6000FT
X RT TURN PHR OFF >6000FT
X RT TURN PHR OFF >6000FT 2500. 1000. 0 00 E AD. 140. ZD. 50. Ida. IBO. TRUE RIRSPEED IN KNOTS 1000 LORD C/P LINK ZD. 100. 140. 150. BD. TRUE AIRSPEED IN KNOTS PTAS

FORM \$2300 (10/71)

-21

NUMBER | VOLUME 7

45020 - AFT RH CZP LINK LORO ON=24900L8 CO=13.2IN FNO
CONTROL REV. POHER ON 254RPH

O LONG CONTROL REV 2000FT

O LONG CONTROL REV 2000FT

A DIR CONTROL REV 2000FT

+ LAT CONTROL REV >6000FT

X LONG CONTROL REV >6000FT

X LONG CONTROL REV >6000FT

O DIR CONTROL REV >6000FT 2600. B 8 50ıda. 140. zb. AD. 80. FTAS TRUE RINSPEED IN MNOTS 00 . .1000. ZD. AD. 50. ıda. 150 . FTRS TRUE RINSPEED IN MNOTS

THE BOEING COMPANY

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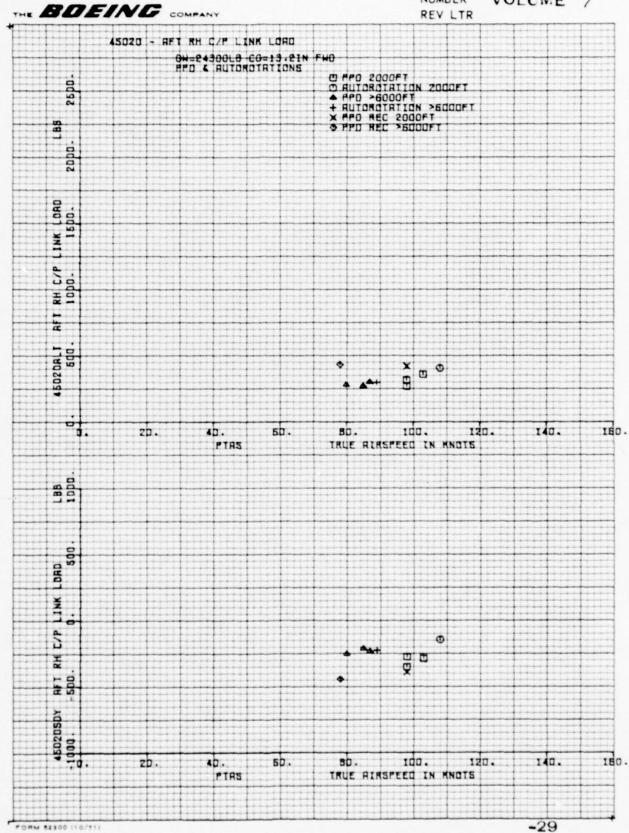
FORM \$2300 (10/71)

THE BOEING COMPANY

REV LTR 45020 - AFT RH C/P LINK LORD 0H=24500LB C0=15 .21N FND 284RF O FLARE O SPIRAL DESCENT 2600. 3 2000. 0 0 5020ALT 500. 0 0 0 四 160. 20-40-50. 100-PTAS TRUE ATRSPEED IN MNOTS -Spo. q. Sqo 0 0 D 0 \*502050Y 0 10. 60. 100-140-160. TRUE AIRSPEED IN MNOTS PTAS FORM \$2300 (10/71) -25

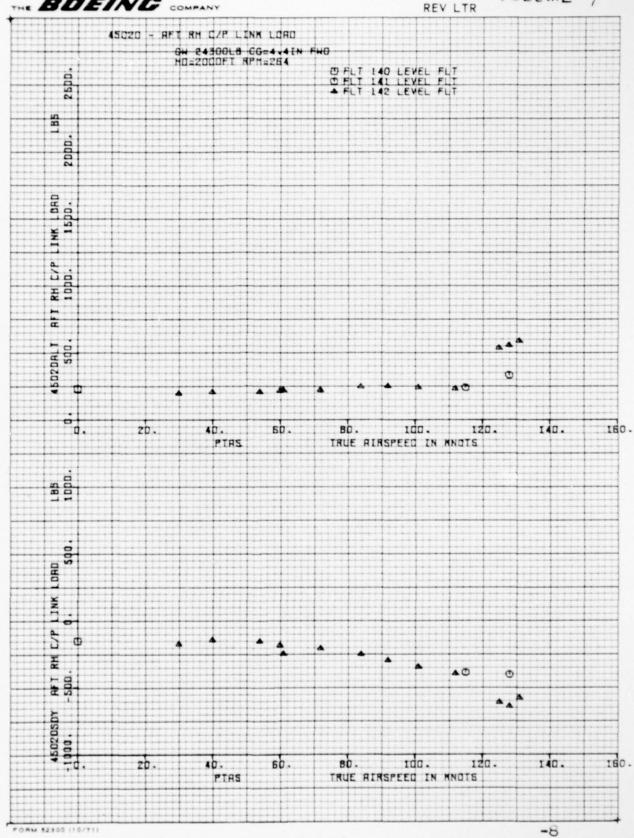
SHEET 256

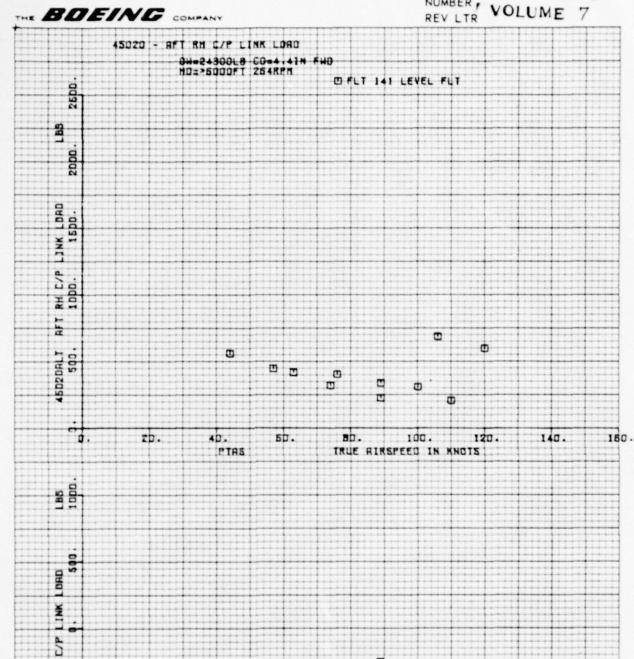
NUMBER REV LTR



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NUMBER





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FORM \$2300 (10/31)

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TRUE AIRSPEED IN MNOTS

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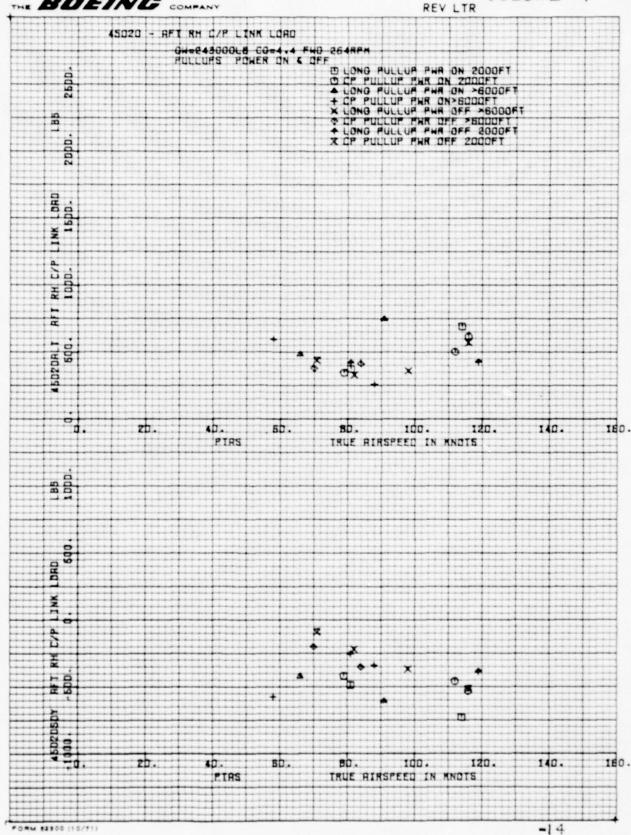
120.

140.

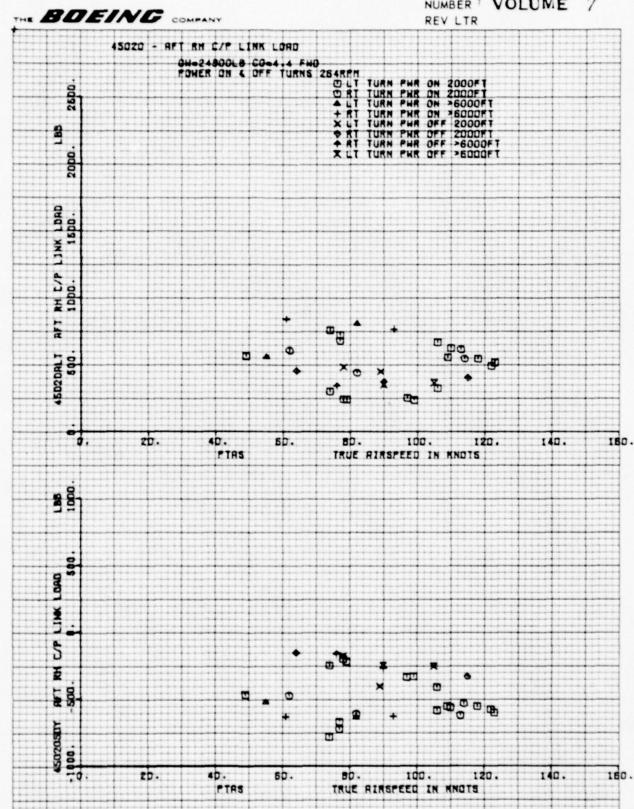
-9

150.

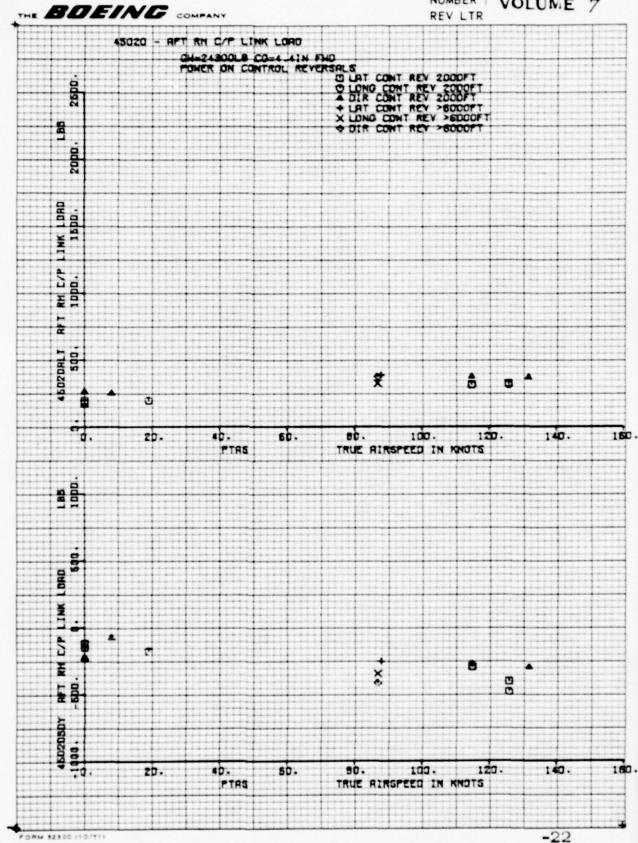
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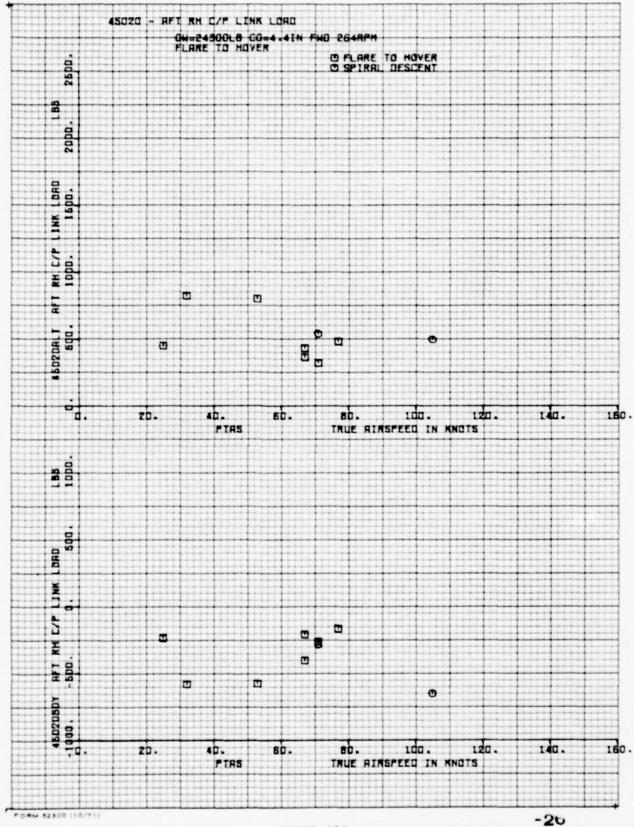
-18



FORM \$2300 (10/71)

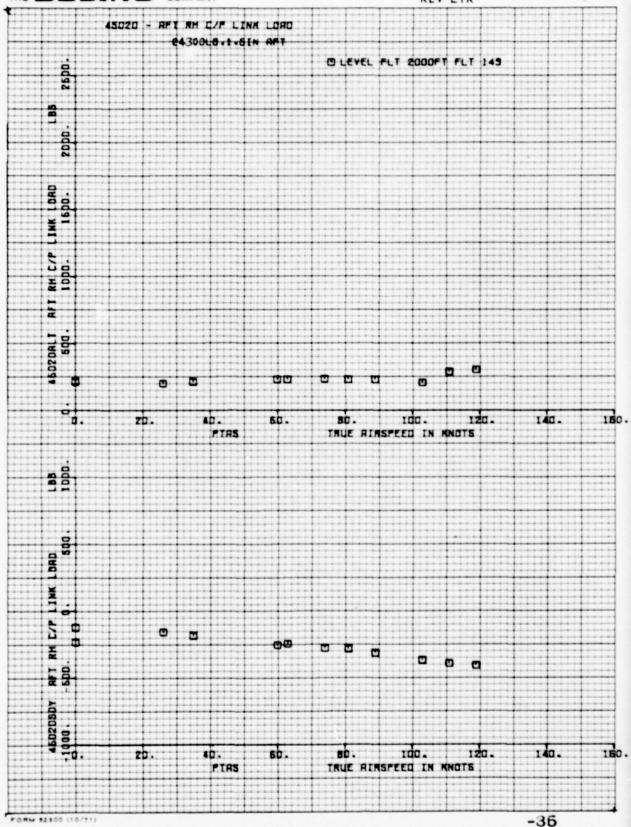


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NUMBER VOLUME 7 REV LTR

THE BOEING COMPANY 45020 - RFT RH CZP LINK LORD GH 24500L6 CG=4.4(N FHO 264RPM O PPO 500 FPH O A/R STERDY 8 LINK 1080 100 0 120. 140. AD. 50. 80. 100. 160 -TRUE RIRSPEED IN MNOTS FIRS 1000 0 Pop 45020SDY -1900. 140. Ab. BD . 80 . 100. 120. 160 -TRUE AIRSPEED IN KNOTS PTAS -30 FORM \$2300 (10/71)



PREPARED BY: J. Bendo CHECKED BY:

NUMBER D210-11168-3 REVLTR Volume 7

MODEL NO.

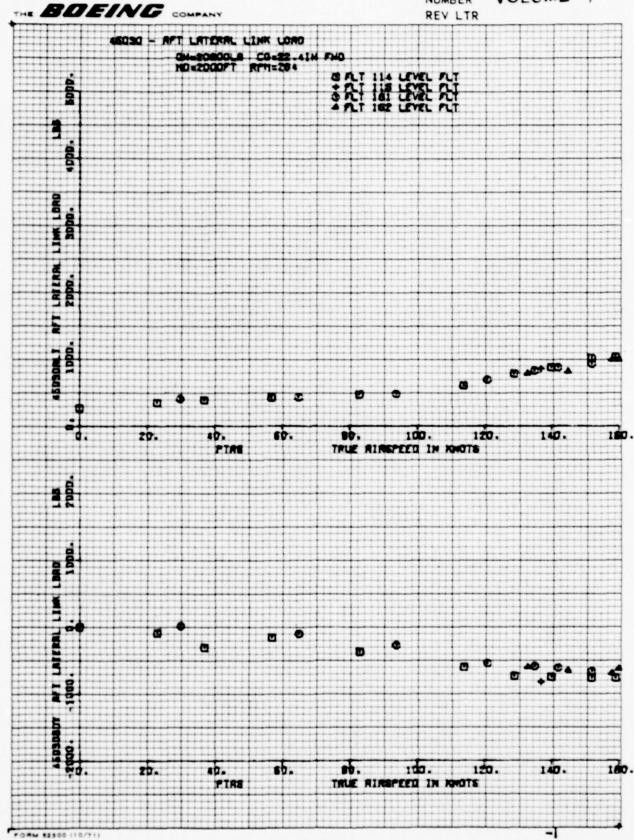
THE BOEING COMPANY DATE:

8

8/28/78

4.8 Aft Lateral Link

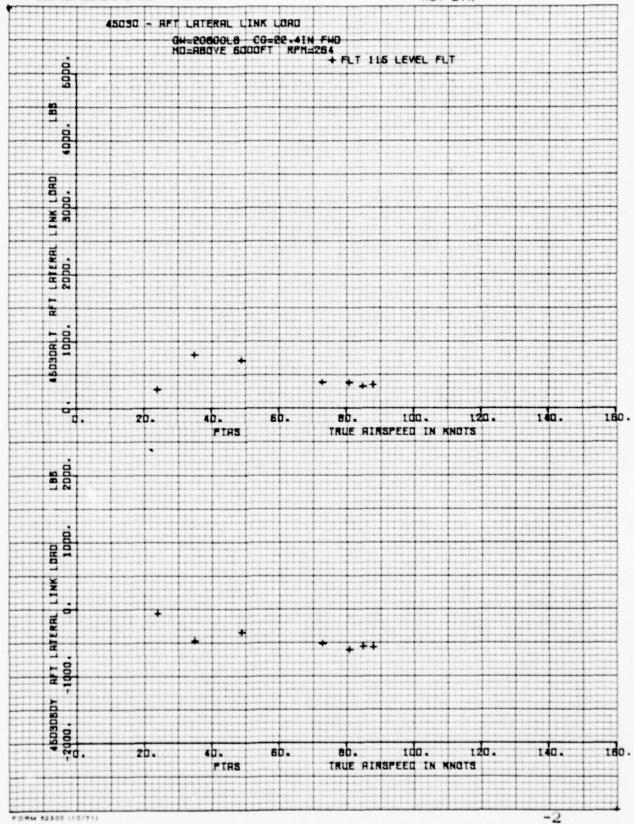
FORM 11180 (8/87)

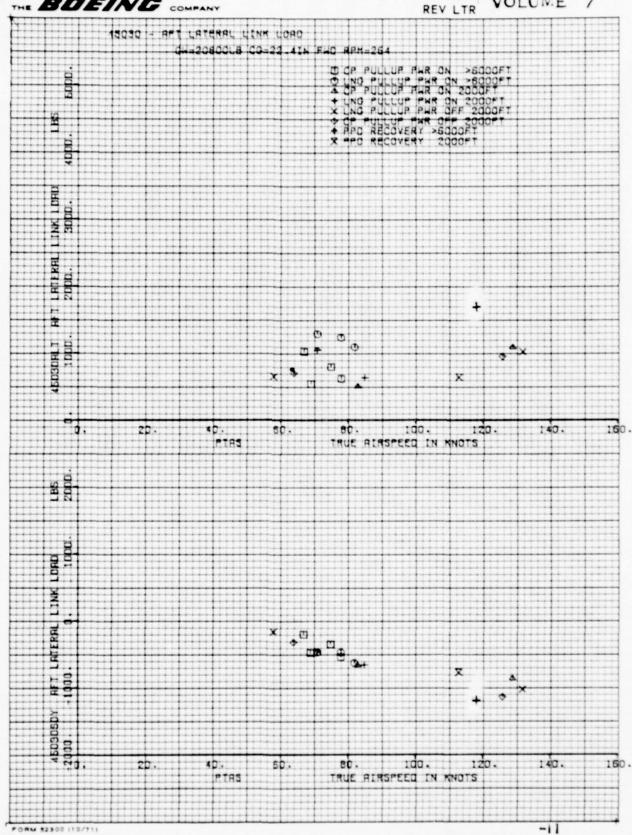


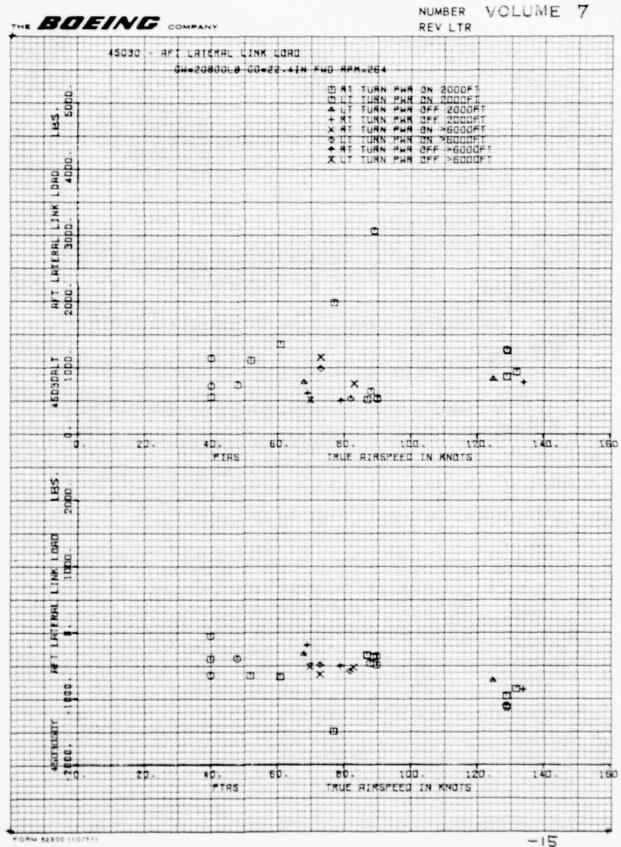
SHEET 267

NUMBER REV LTR

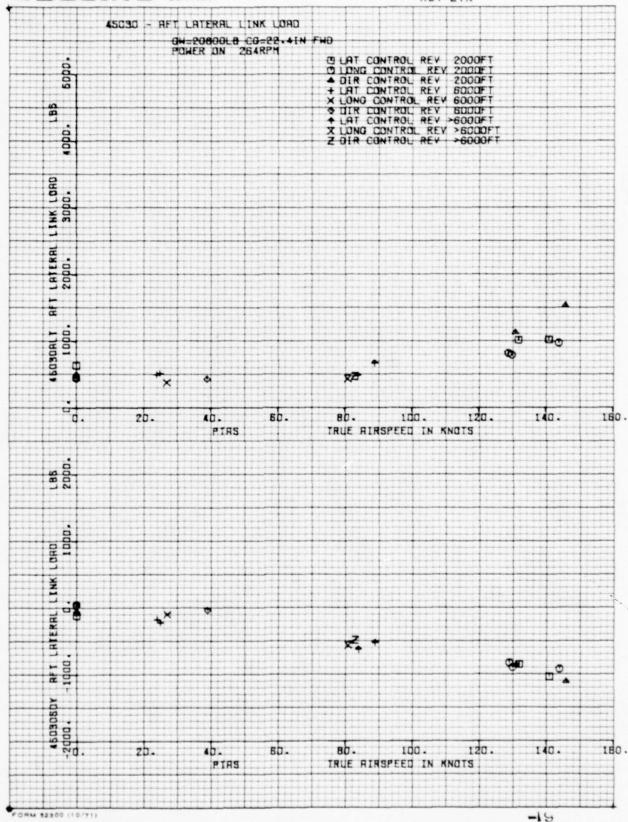
THE BOEING COMPANY



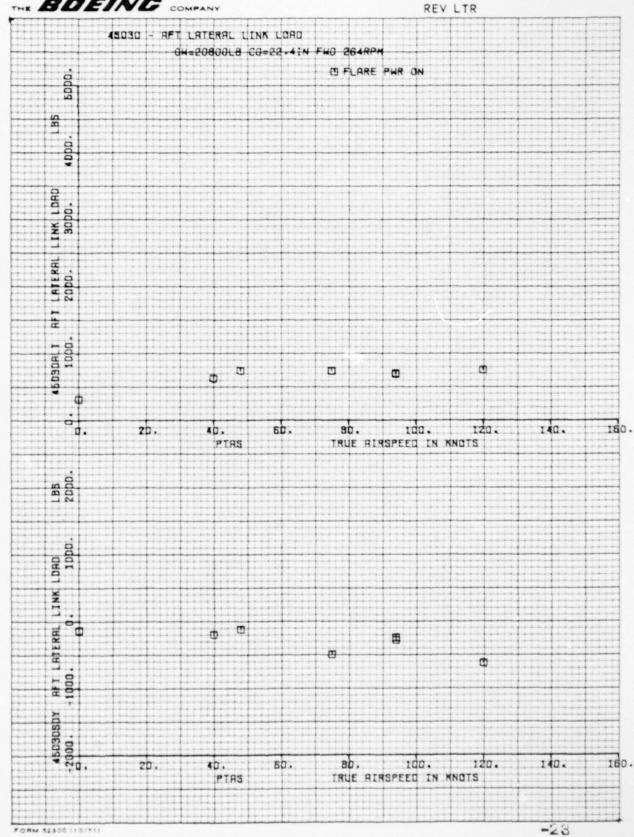




SHEET 270

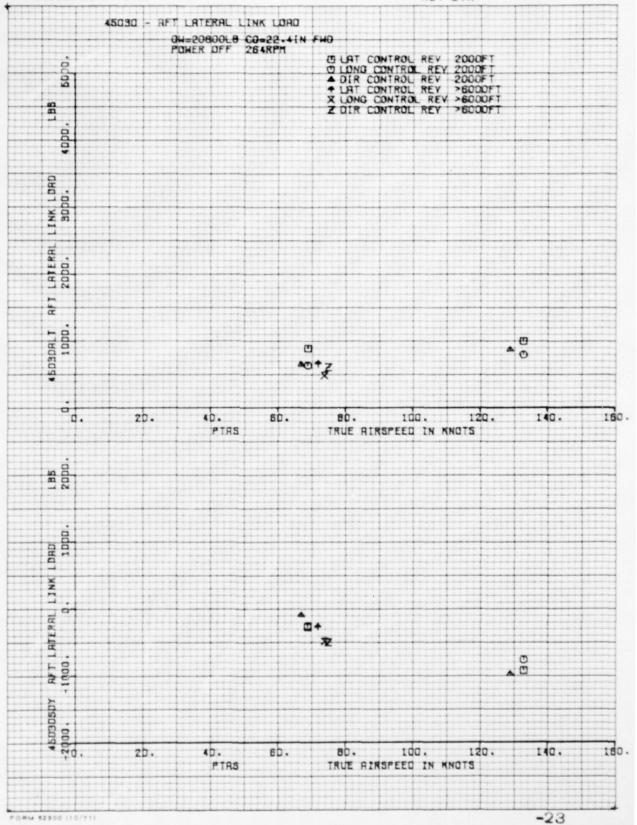


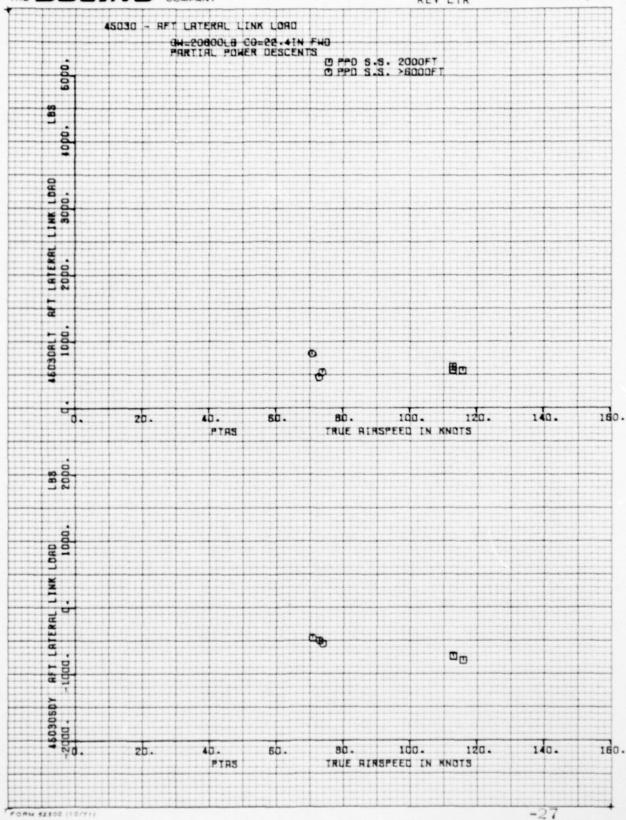
THE BOEING COMPANY

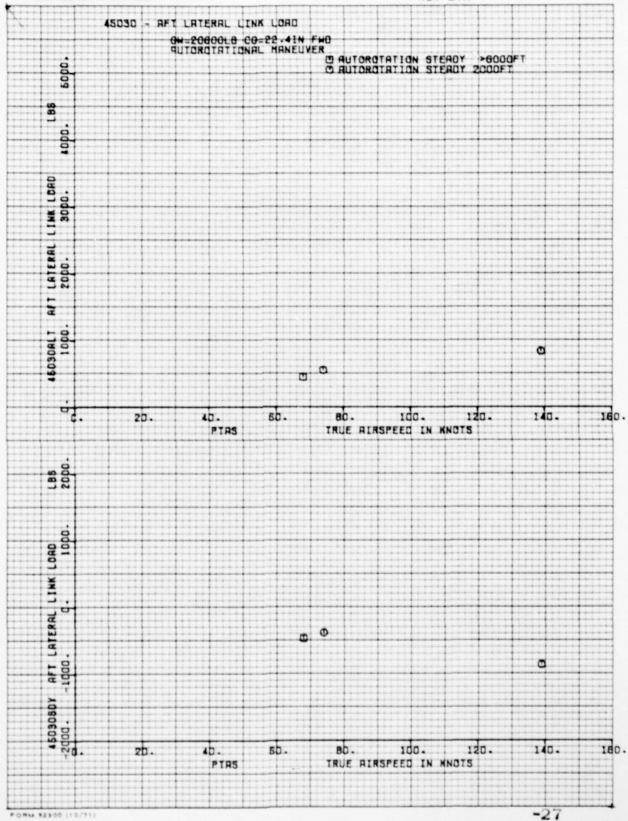


NUMBER REV LTR

THE BOEING COMPANY

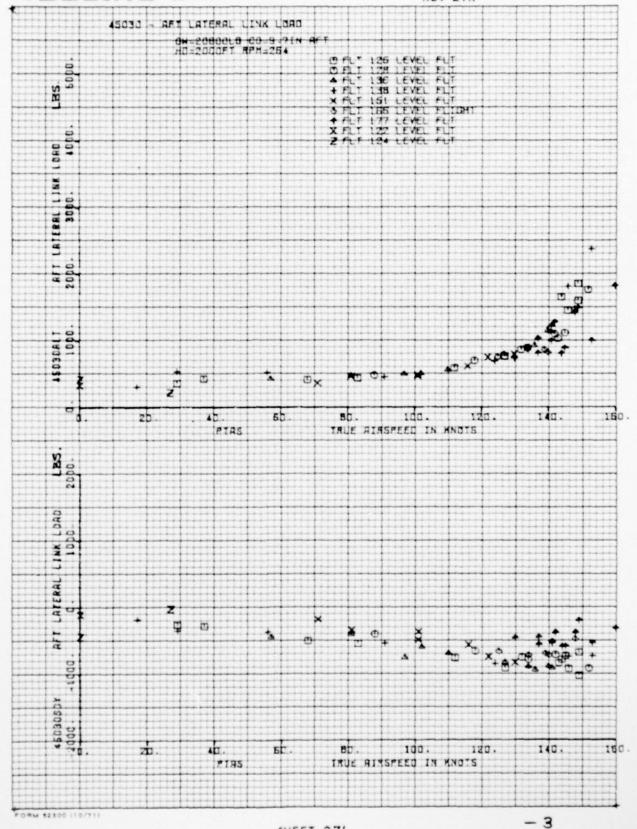








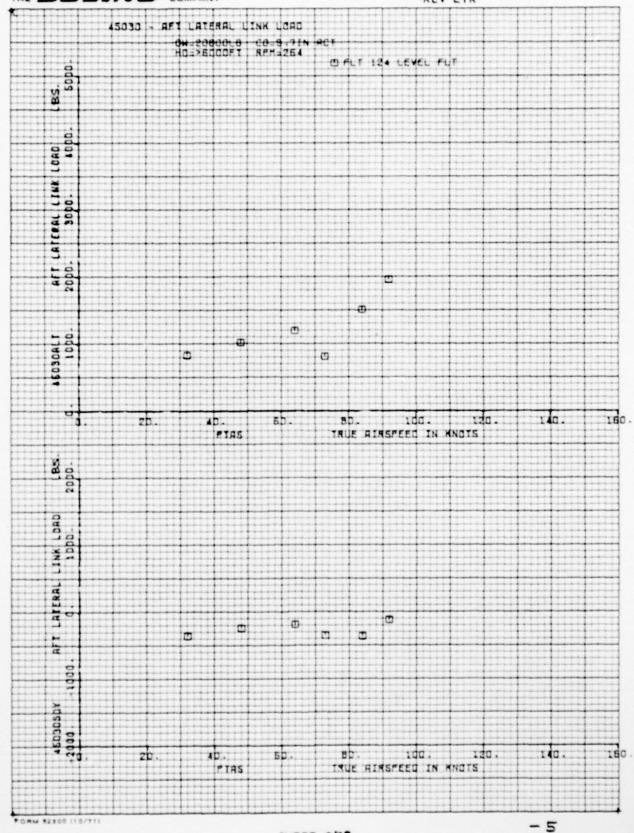
NUMBER REV LTR



NUMBER

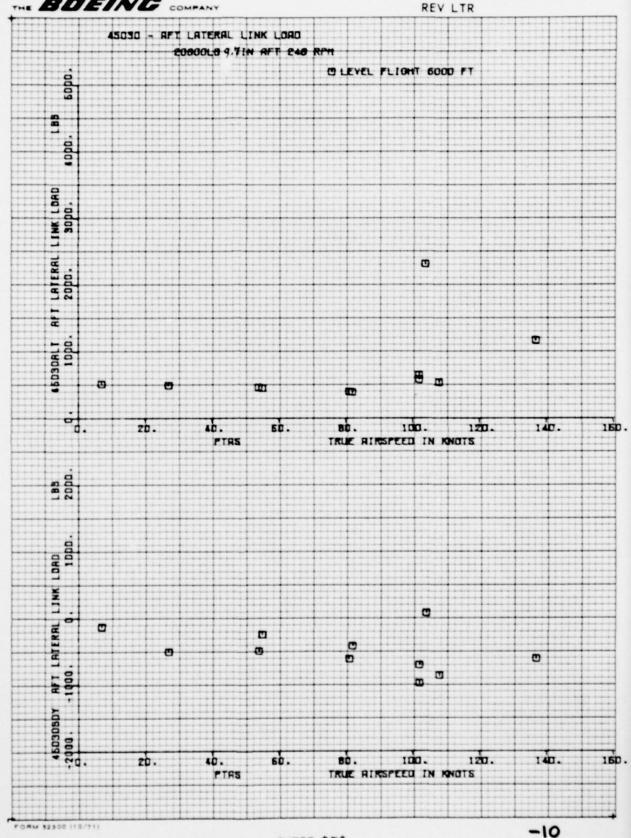
REV LTR 45030 - RET LATERAL LINK LORD du=20000LB C0=0.7IN AFT © FLT 124 LEVEL FLT © FLT 127 LEVEL FLT ▲ FLT 137 LEVEL FLT + FLT 139 LEVEL FLT × FLT 151 LEVEL FLT ◆ FLT 177 LEVEL FLT Sopo. AFT LATERAL LINK LOAD 2000. 3000. LEOSOALT 10po. 0 AD. ıda. IZU. 140. 160 . BD. 20. BD. FIRS TRUE ALASPEED IN MNOTS 2000. -1900. 9. 10pp. B 0 E ▲ 6030SDY -2000. 100. 120. I du . 180. ZD. AD. BD. 80. PIRS TRUE RIMSPEED IN MNDTS FORM \$2300 (10/71) -4





D210-11168-3 VOLUME 7 NUMBER

THE BOEING COMPANY



AD-

33

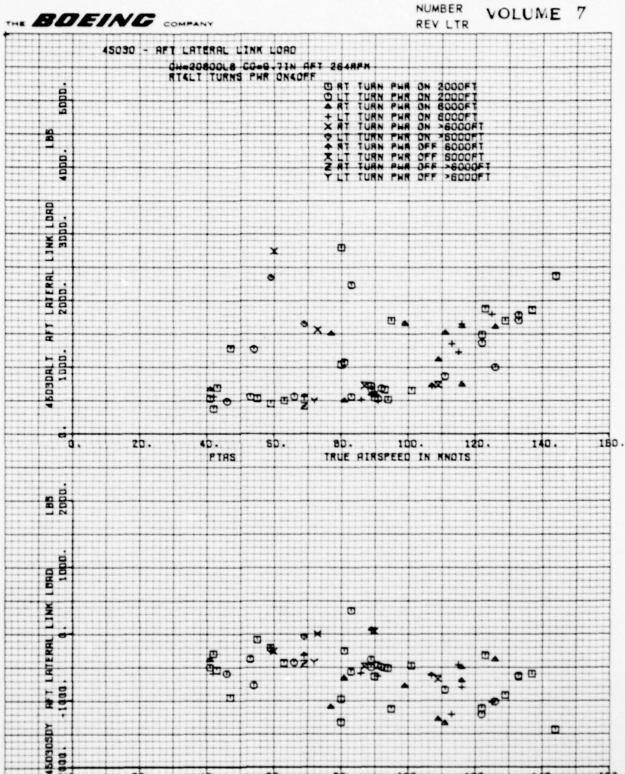
FORM \$2100 (10/71)

NUMBER THE BOEING COMPANY REV LTR 45030 - AFT LATERAL LINK LOAD 04-2000000 00-9 71N AFT UND PULLUP PHR ON 2000FT OF FULLUP PHR ON 2000FT UND PULLUP PHR ON 6000FT OF FULLUP PHR ON 5000FT UND FULLUP PHR ON 56000FT PULLUP PHR ON > 5000FT O PULLUP PHR OFF ANY HO PULLUP PHR OFF ANY ALT 2000. 3000. 409 0 0 0 m # 8 A TRUE AIRSPEED IN KNOTS

4 80 4 D

TRUE AIRSPEED IN MNOTS

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FORM \$2300 (10/71)

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TRUE AIRSPEED IN KNOTS

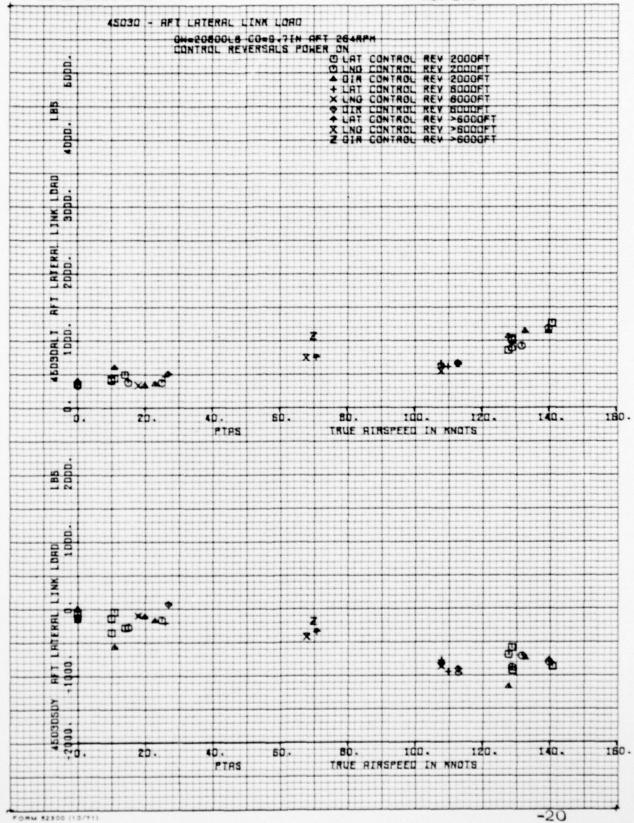
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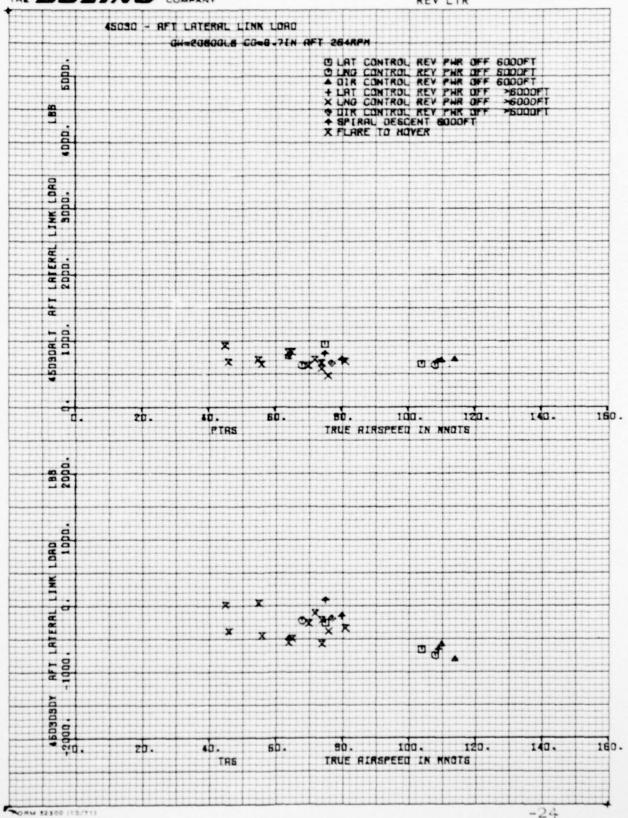
-16

120 .

160.

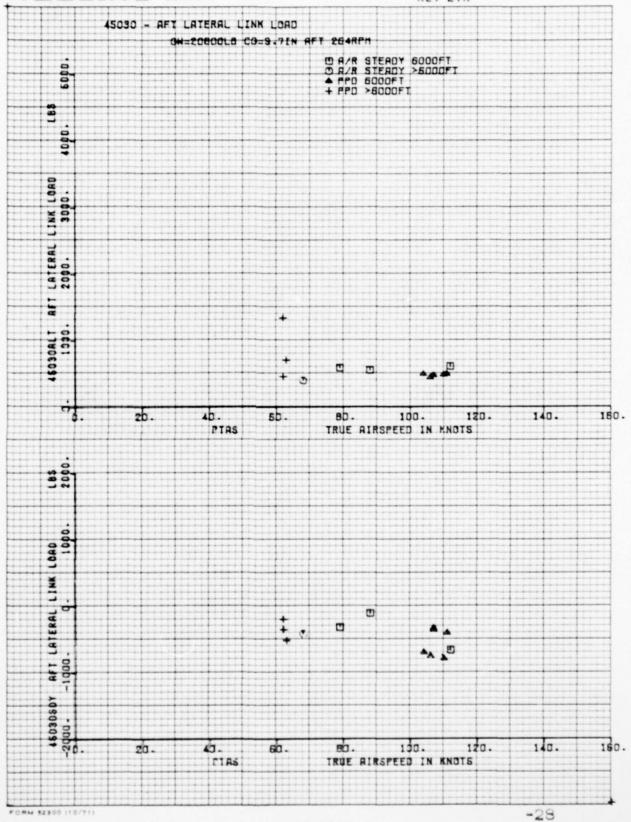
VOLUME 7 NUMBER REV LTR

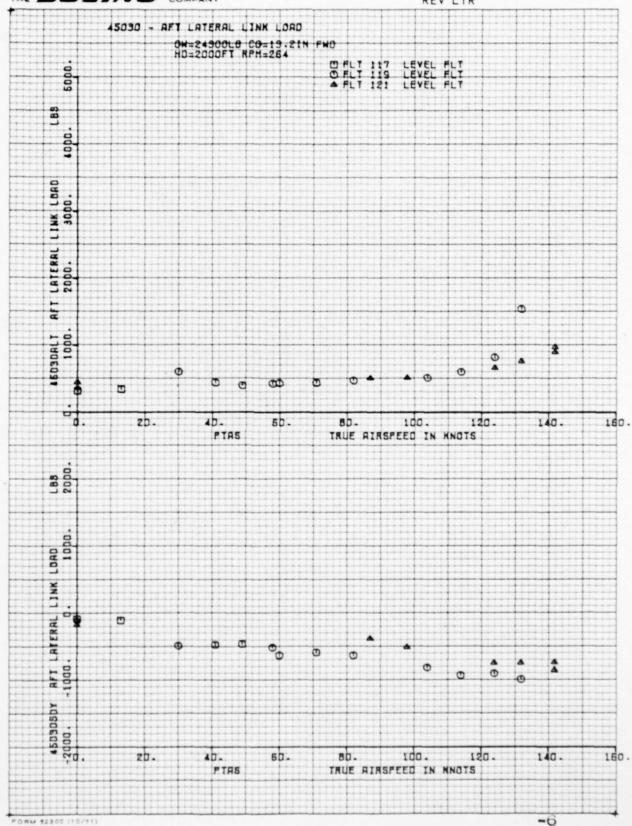




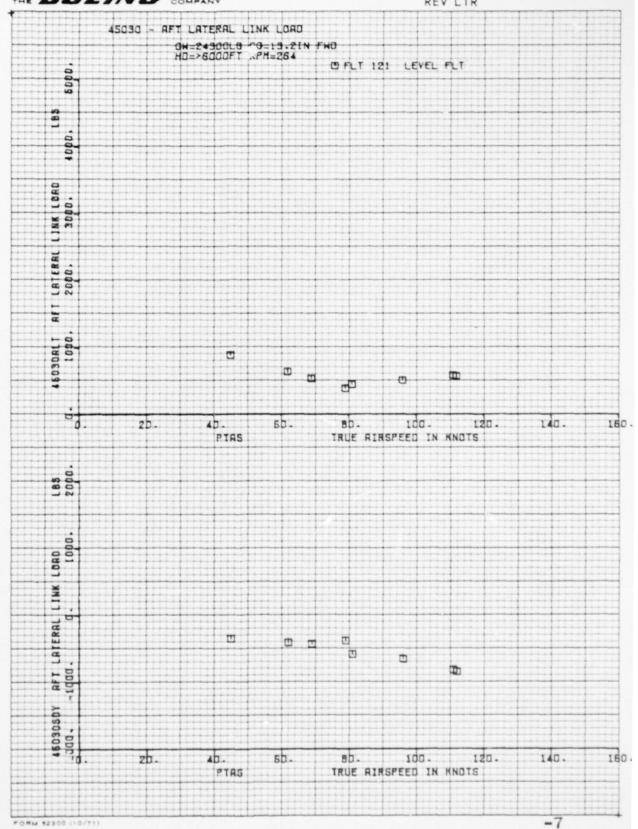
NUMBER | VOLUME 7

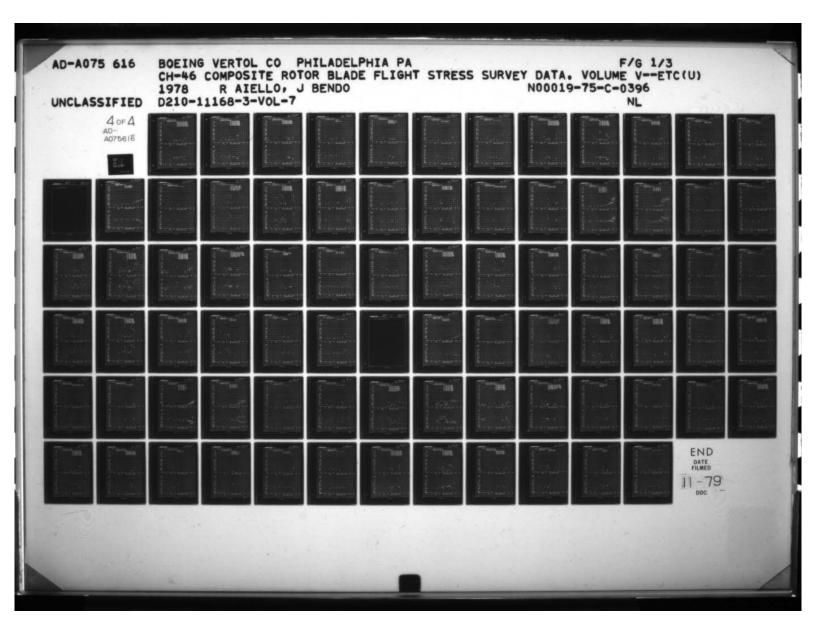
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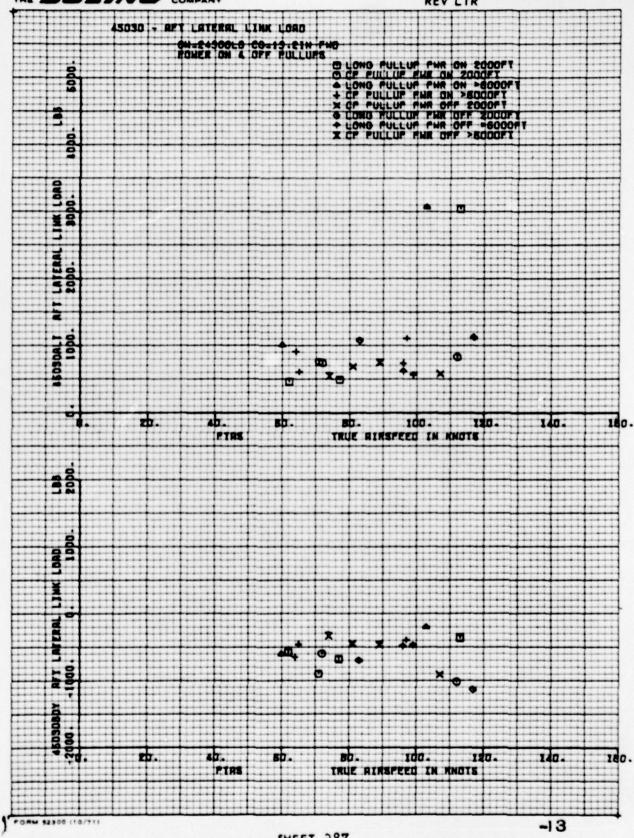


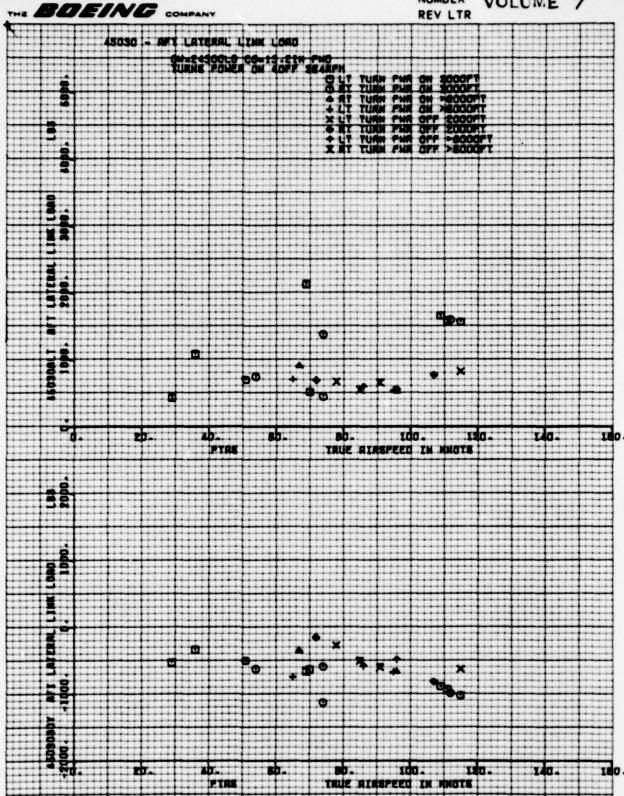
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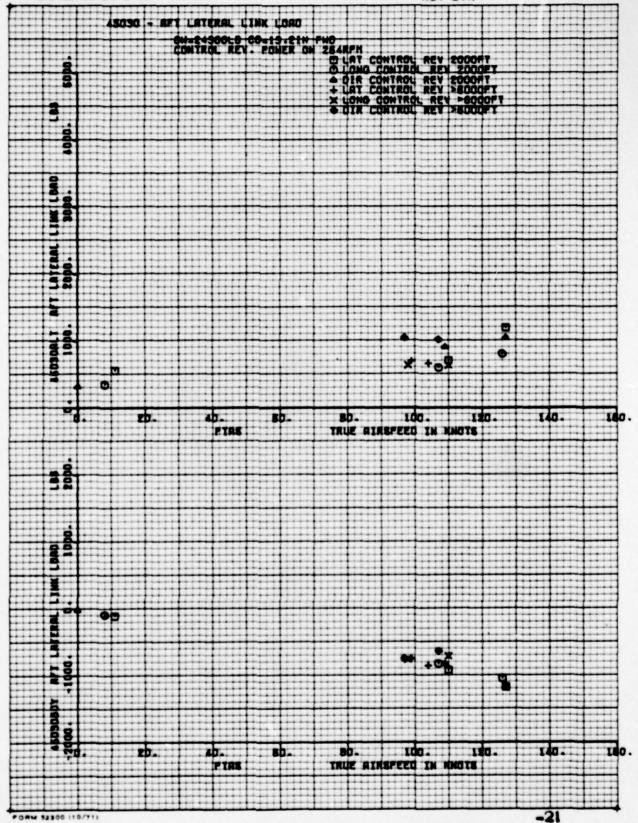


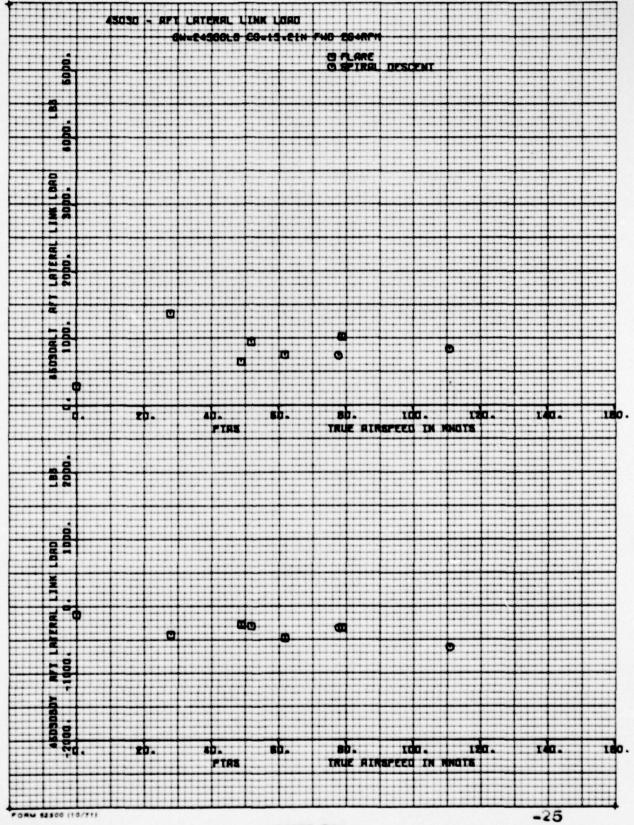






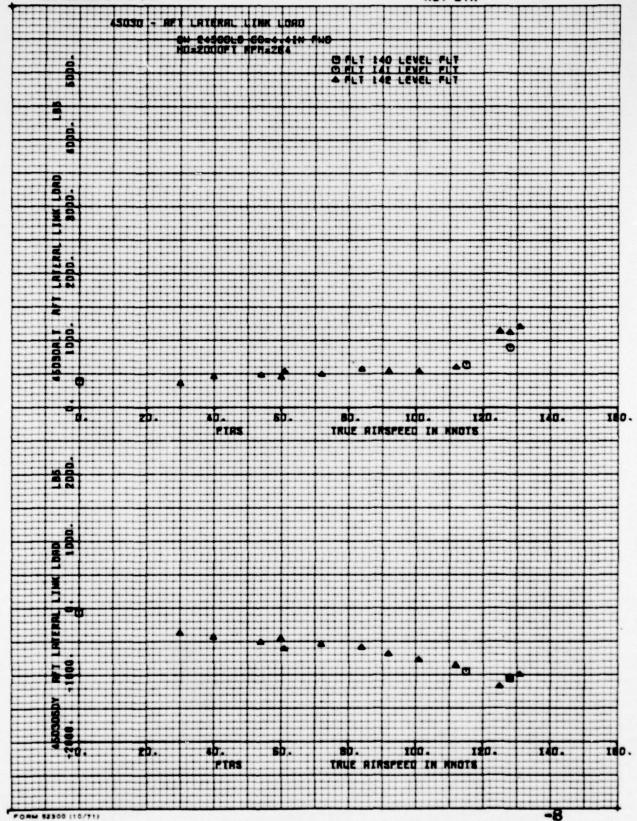


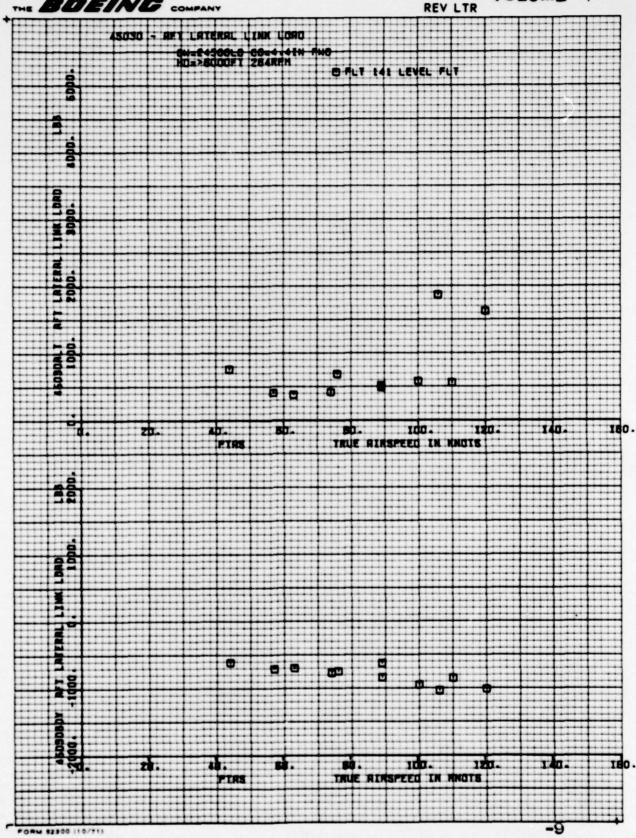




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D210-11168-3 NUMBER | VOLUME 7





SHEET 293

REV LTR ASOSO - AFT LETERAL LINK LORD SULLUPS POWER ON & OFF O LONG FULLUF PHR ON 2000FT
O CP PIULUF PHR ON 2000FT

LONG FULLUF PHR ON >8000FT

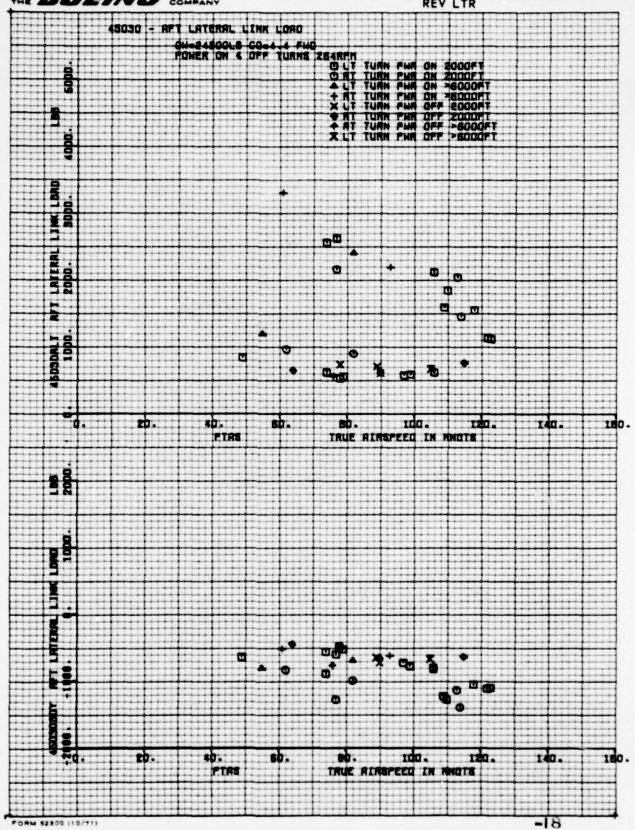
LONG FULLUF PHR ON >8000FT

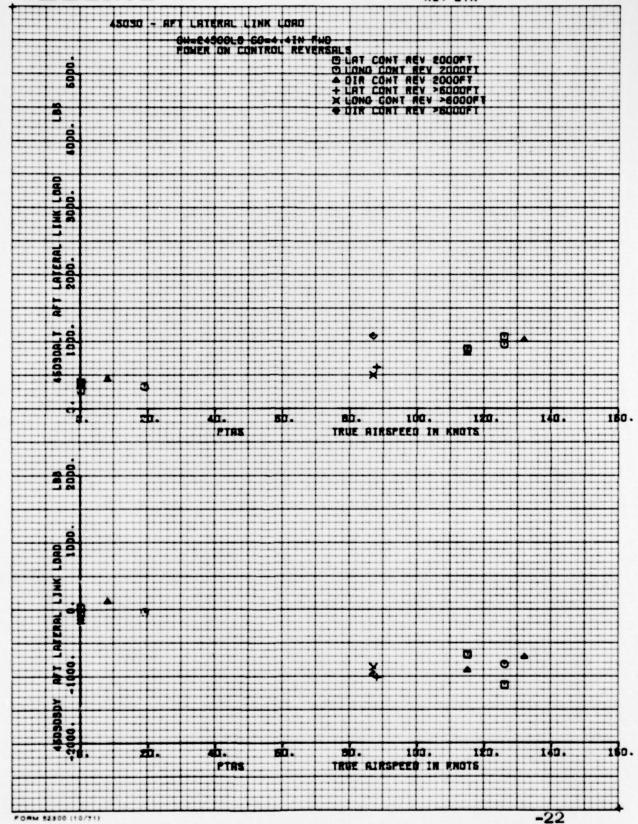
X LONG FULLUF PHR OFF >8000FT

LONG FULLUF PHR OFF 2000FT

X LP FULLUF PHR OFF 2000FT

X LP FULLUF PHR OFF 2000FT 5. U 0 X 0. 4 20. alt. 140. 100. PIRE TRUE RIRSPEED IN KNOTS 38 LATERAL LI 4 100. 140. 180. TRUE RIRSPEED IN MNOTS PTAS FORM \$2300 (10/71) -14





NUMBER

THE BOEING COMPANY REV LTR 45030 - RFT LATERAL LINK LOAD SU-24500LB GO-4 4IN FUD 264RPM O SPIRAL DESCENT 0 9 9 9 0 100. 120. 140. 40. BD. . TRUE RIRSPEED IN KNOTS PTRE 200 0 0

20.

FORM \$2300 (10/71)

41.

PTRS

BD. 100. 120.

TRUE RIRSPEED IN KNOTE

140.

-26

NUMBER VOLUME 7 REV LTR

THE BOEING COMPANY 45030 - RET LATERAL LINK LORD GW 24300L0 CG=4.4IN FNO 264RPM MPD 4 R/R CD PPO 5 O R/R STERRY 8b- 100. 120. IBO. TRUE RIRSPEED IN MNDTS PTRS 0 80. 100. 150 . 40. PTAS TRUE AIRSPEED IN KNOTS -30

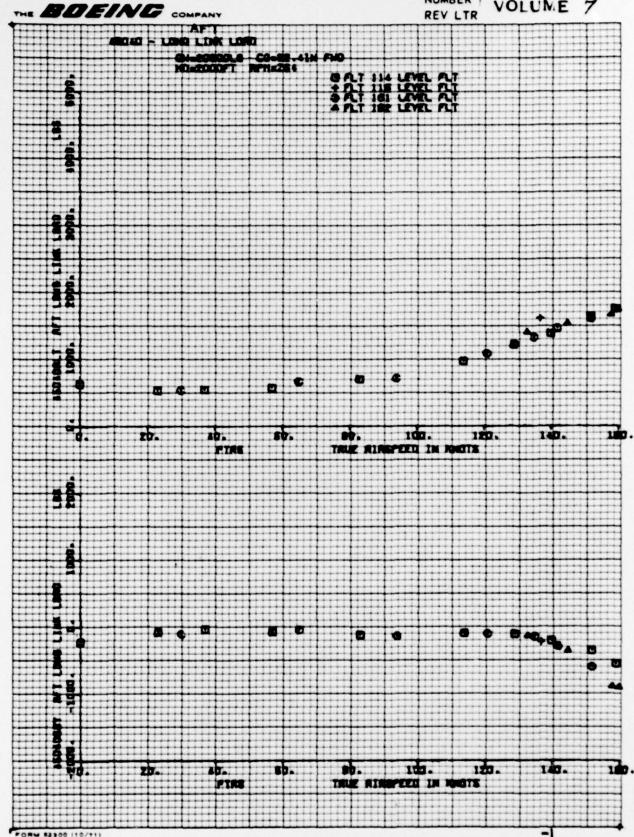
PREPARED BY: J. Bendo

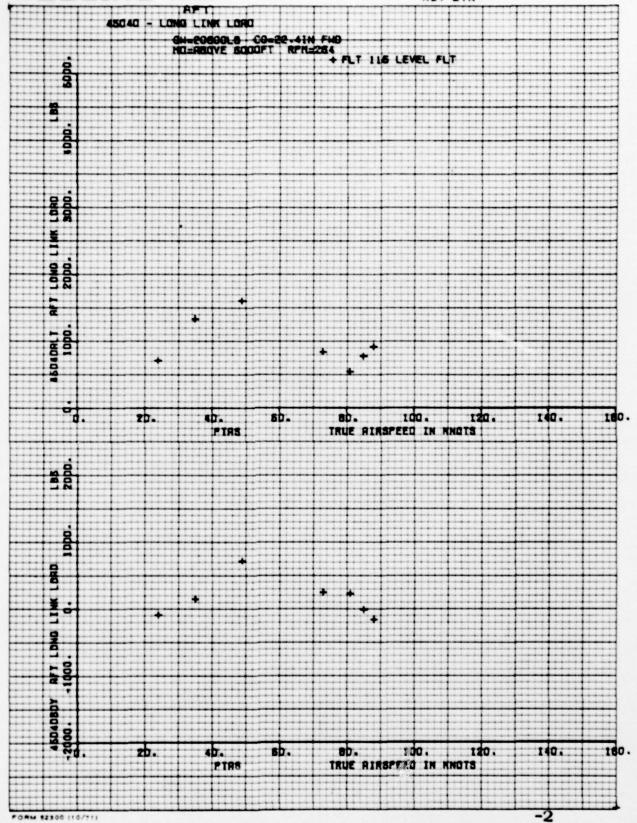
THE BOEING COMPANY DATE:

8/28/78

NUMBER D210-11168-3 REV LTR Volume 7 MODEL NO.

4.9	Aft	Longitudinal	Link
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-11

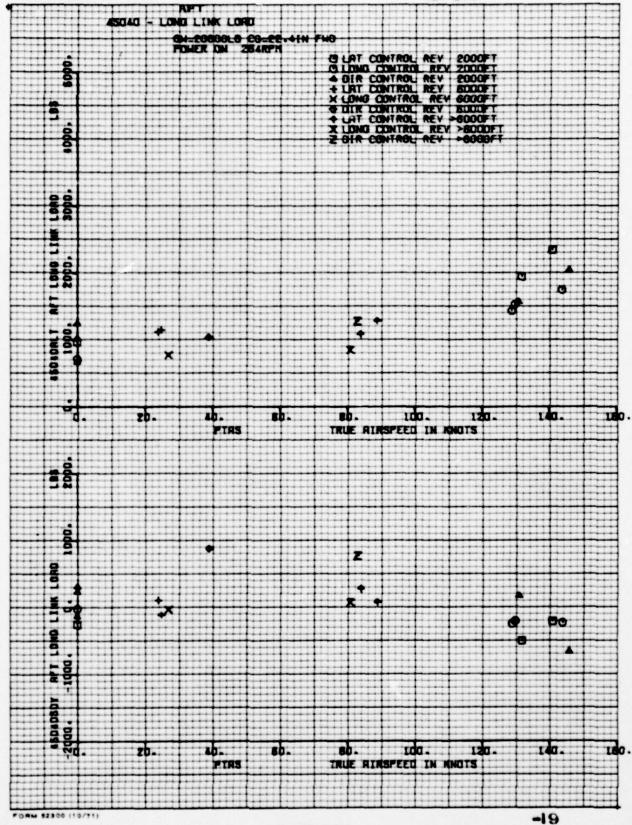
FORM \$2300 (10/71)

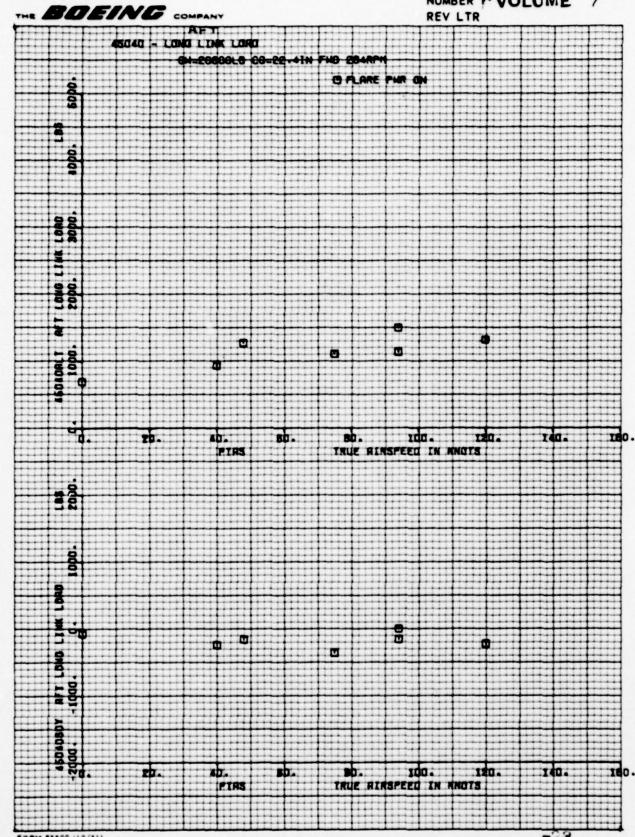
NUMBER

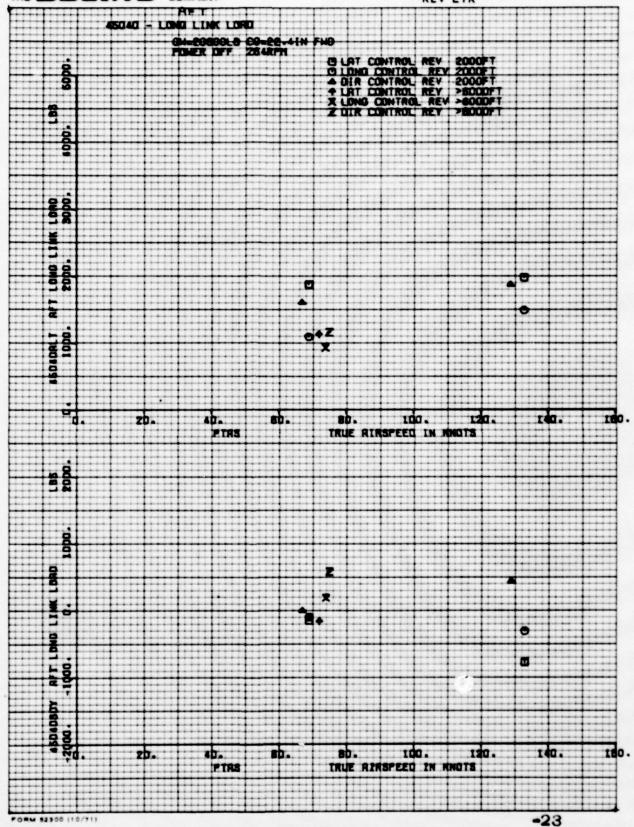
BOEING COMPANY

FORM \$2300 (10/71)

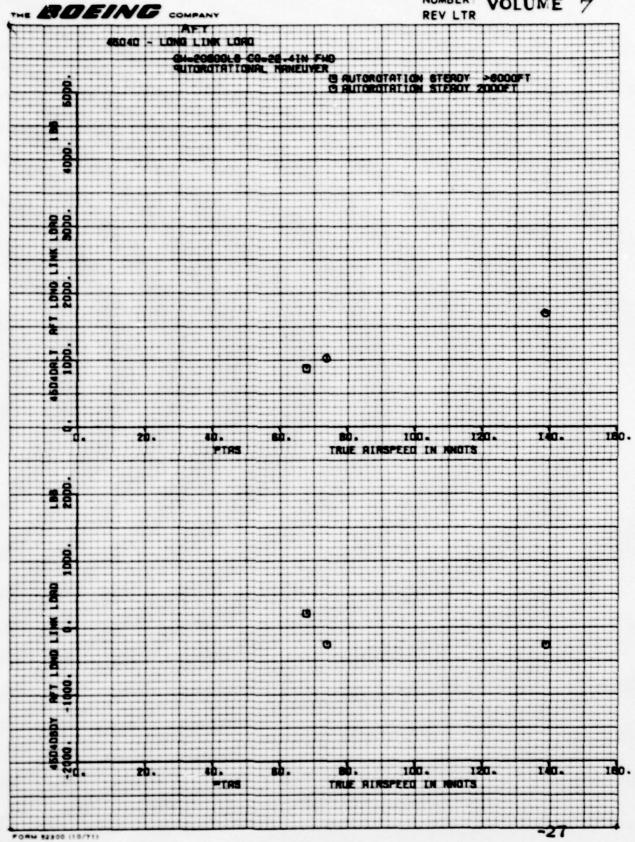
REV LTR 45040 - LONG LINK LONG 0H=20000L0 CO=22.41N FHD AFH=20 G AT TURN PMR ON 2000FT
GIT TURN PMR ON 2000FT
A UT TURN PMR OFF 2000FT
+ RT TURN PMR OFF 2000FT
X AT TURN PMR ON 3000FT
+ RT TURN PMR ON 3000FT
+ RT TURN PMR OFF >6000FT
X UT TURN PMR OFF >6000FT 0 × **D** × - 0 9 0 20. 180 . 100. 140. TRUE RIRSPEED IN KNOTS PIRS 2000 0 0 0 **0** аb. BD. 80. 100. 120. 140. 180 . TRUE AIRSPEED IN KNOTS PTRS -15





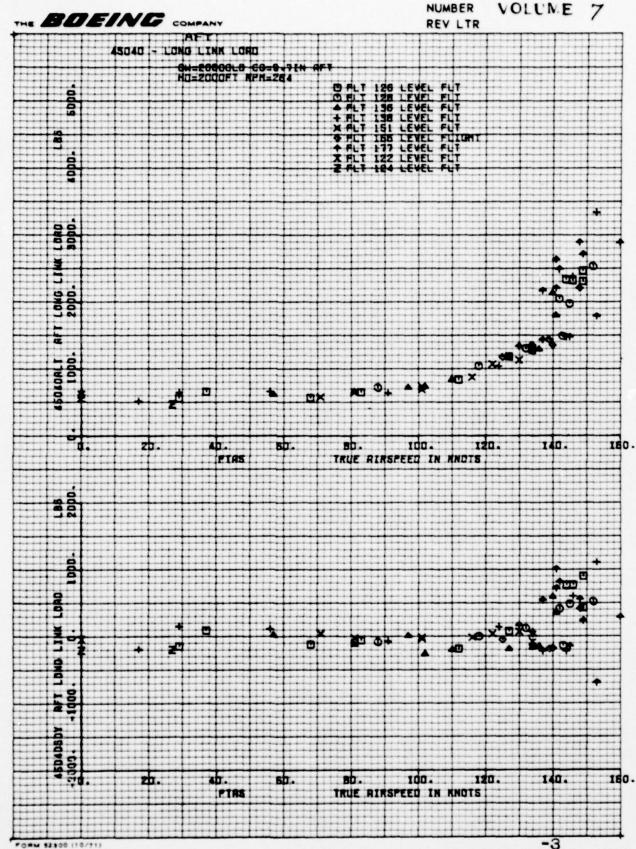


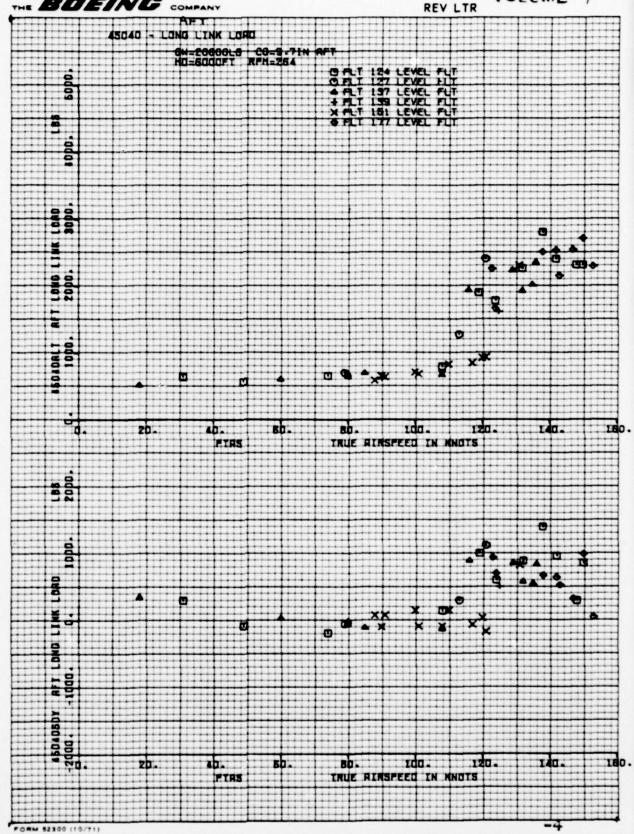
NUMBER! VOLUME 7



FORM \$2300 (10/71)

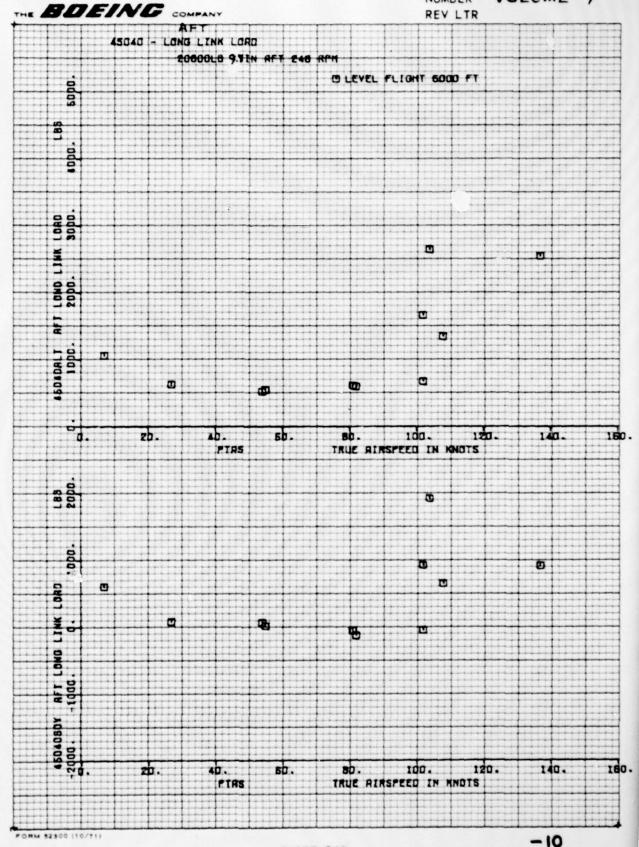
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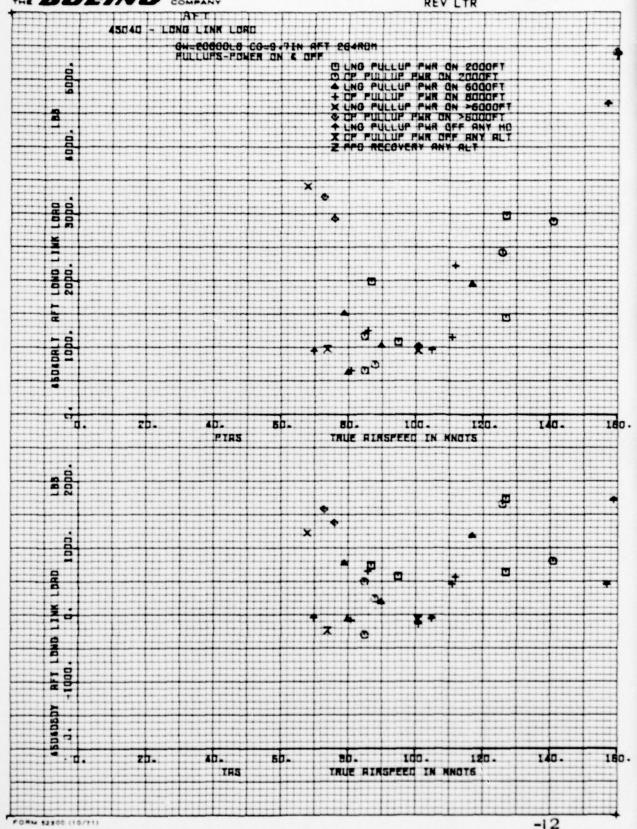


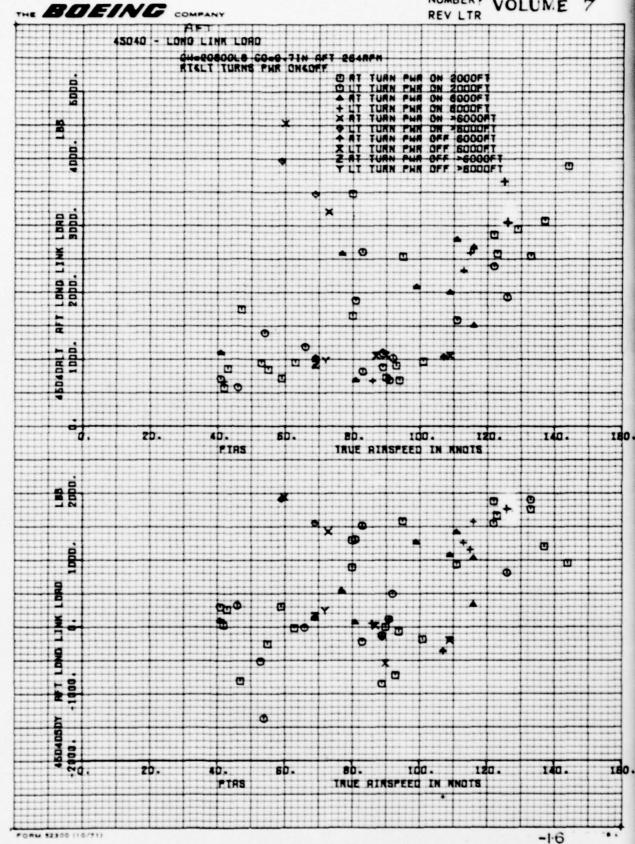


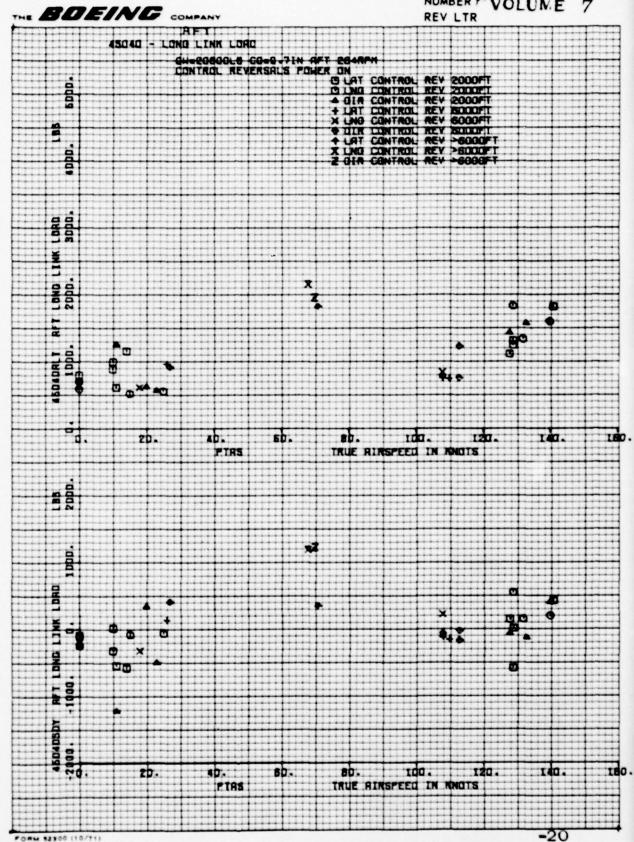
D210-11168-3

NUMBER VOLUME 7

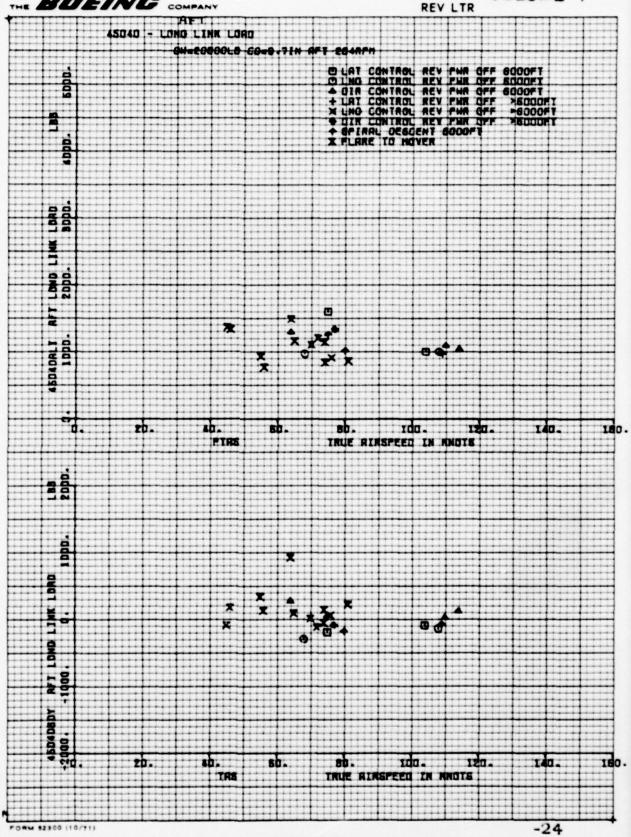




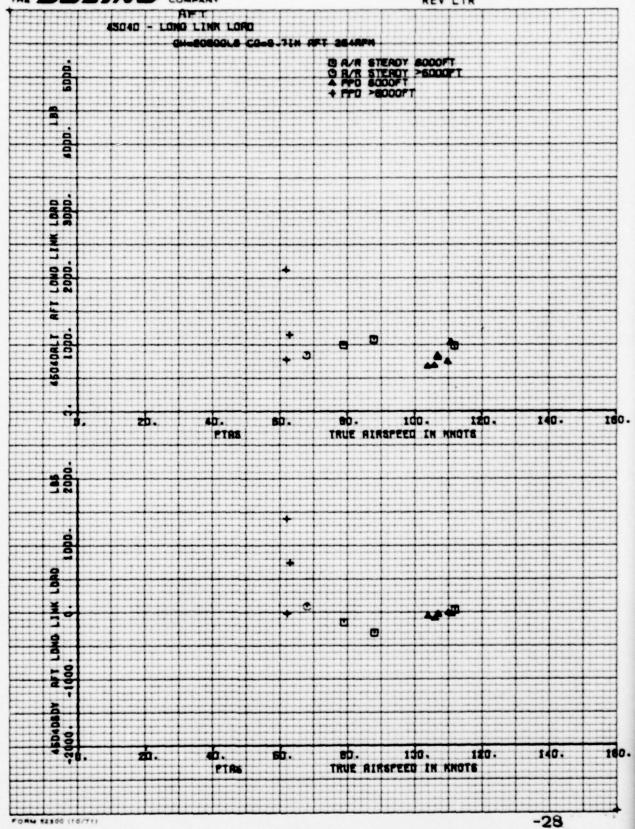


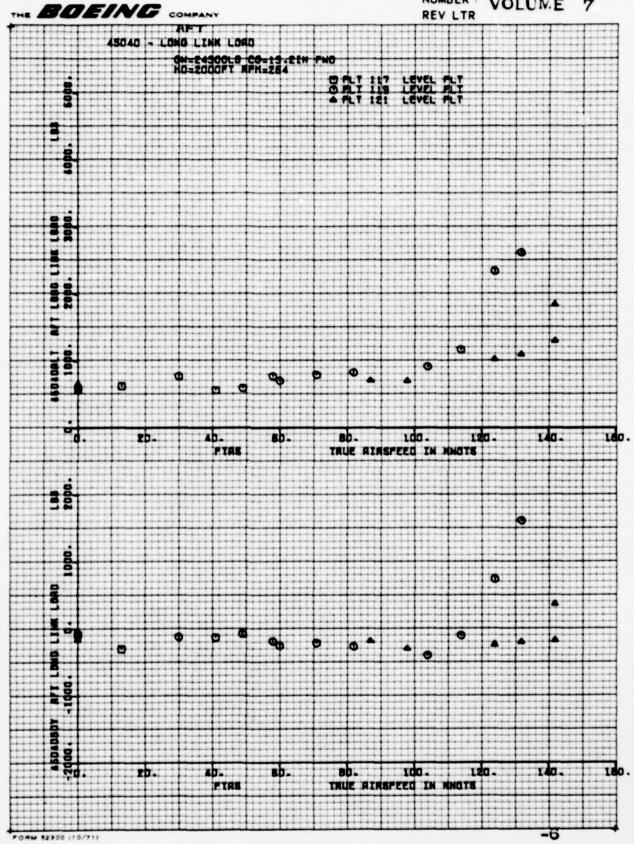


BOEING COMPANY





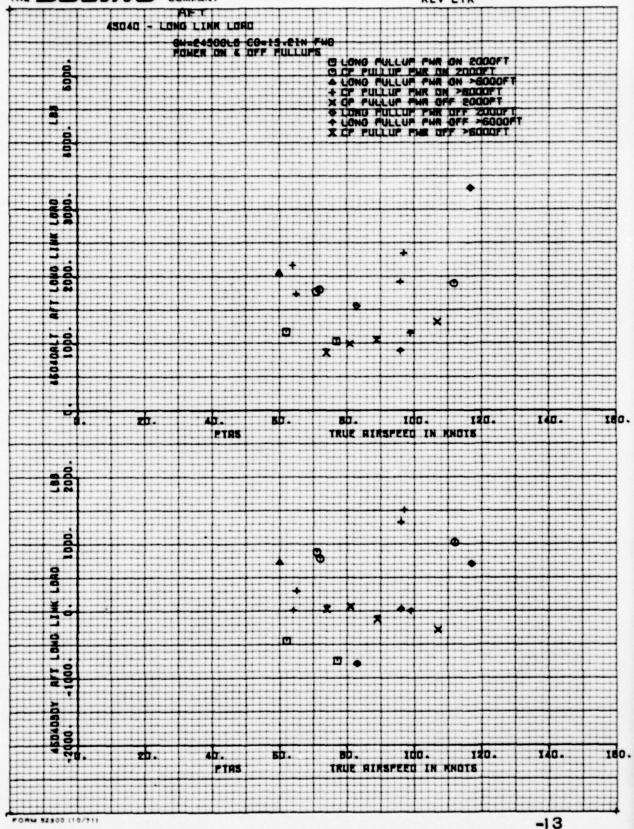




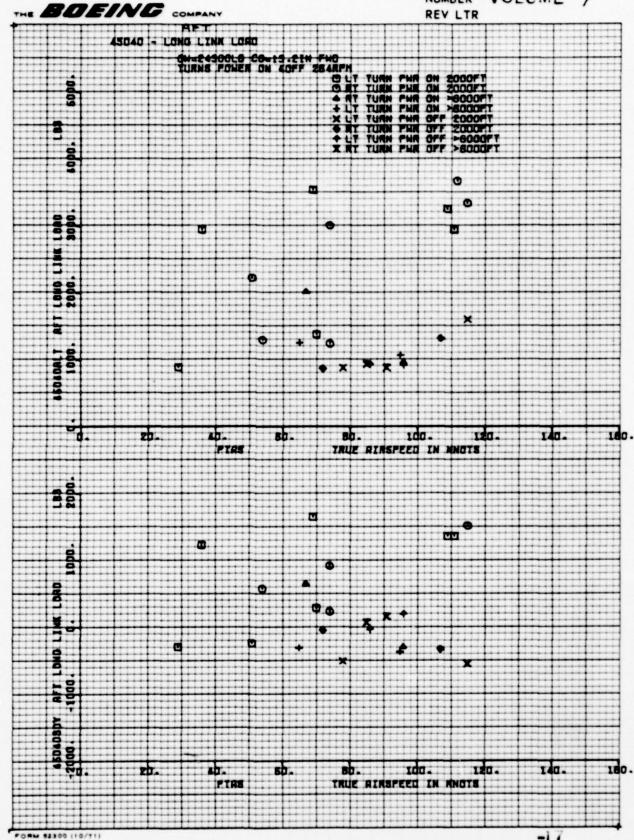
SHEET 319

THE BOEING COMPANY REV LTR 45040 - LONG LINK LORD GW-24500LS CO-15-2FN HD=>6000FT RPH=264 OFLT 181 LEVEL FLT . 0 0 8b. | 100. | 120. | AD. TRUE RIRSPEED IN ANDTS PIRE 8b. | 100. | 120. PTRS TRUE AIRSPEED IN KNOTS

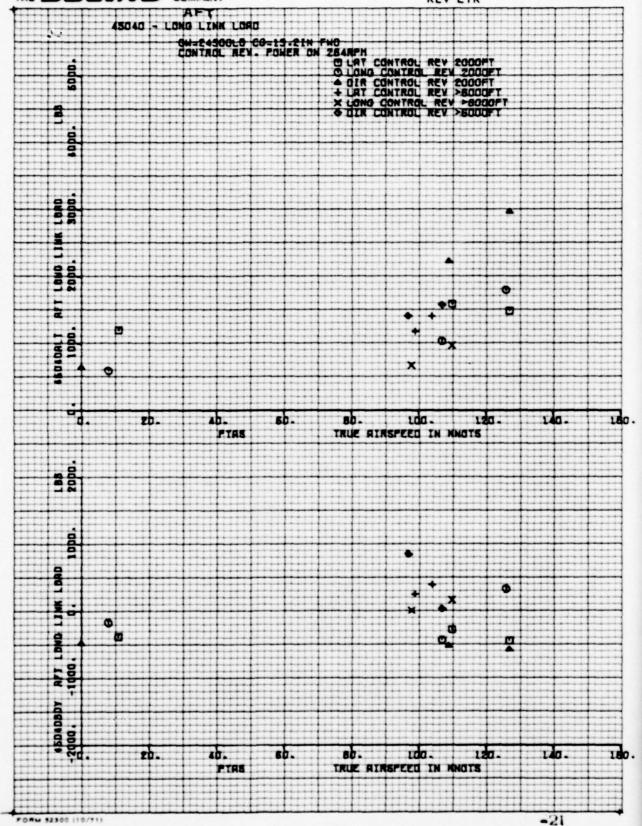
FORM \$2300 (10/71)

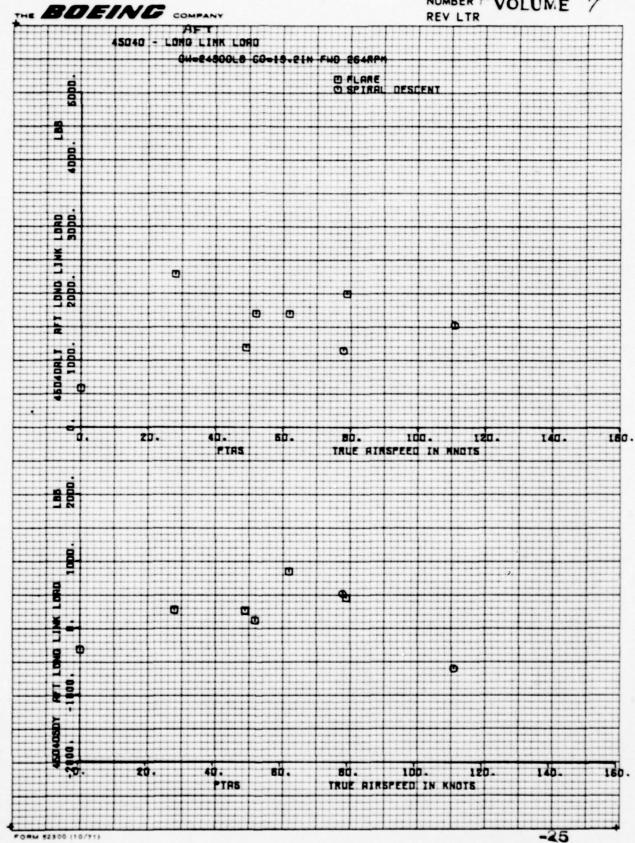


NUMBER VOLUME 7

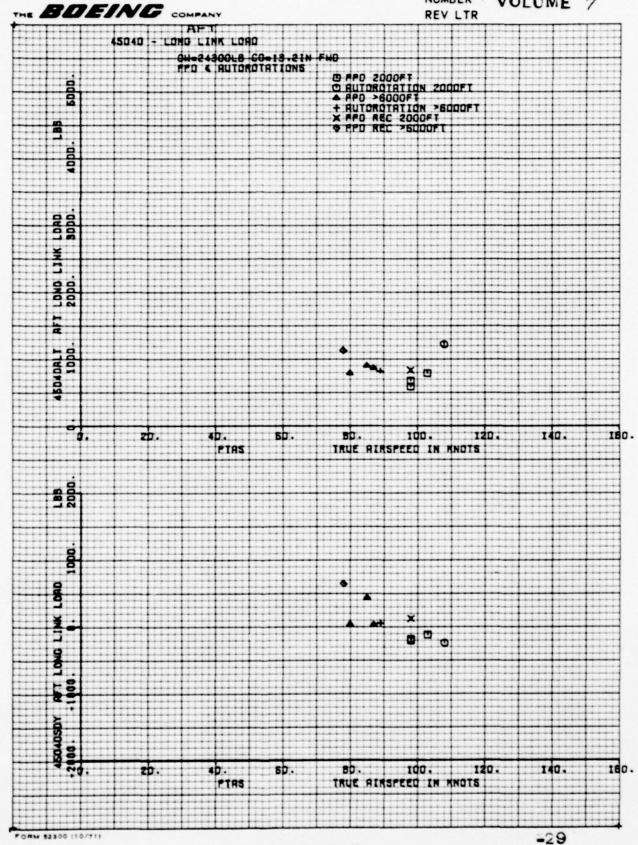


THE BOEING COMPANY



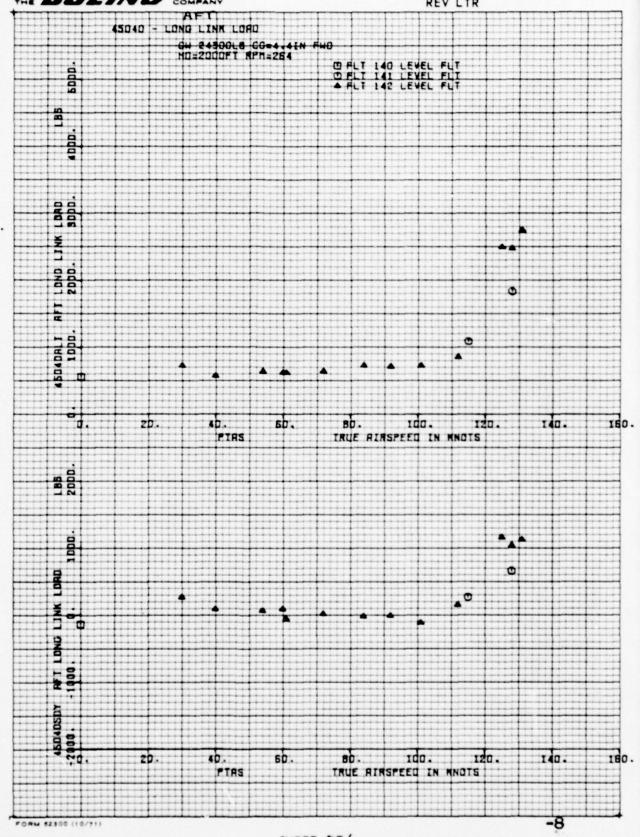


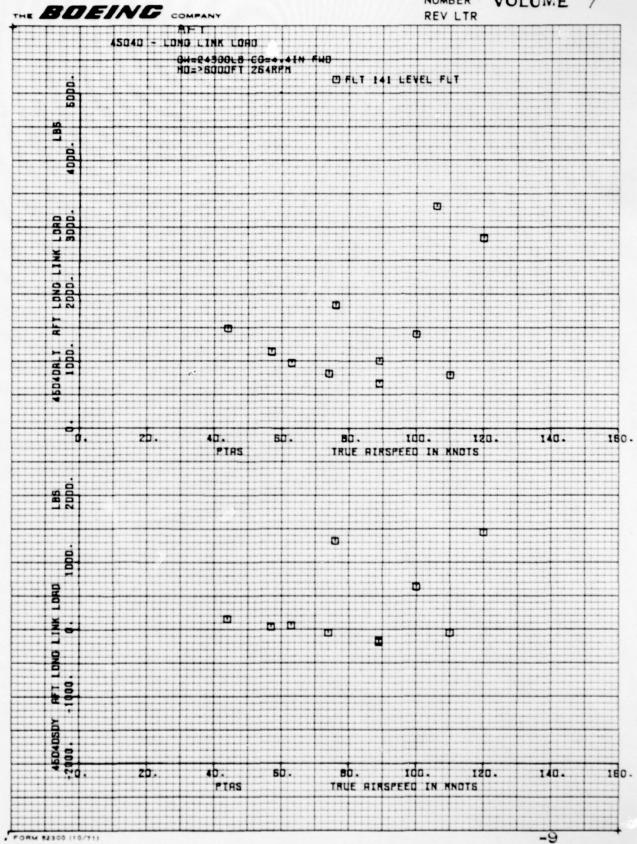
D210-11168-3 NUMBER VOLUME 7



THE BOEING COMPANY

NUMBER VOLUME





-14

NUMBER ' VOLUME 7 REV LTR

THE BOEING COMPANY 45040 - LONG LINK LORD OH=245000LB CO=4.4 FHO 264RPM PULLUPS POHER ON & OFF D LONG PULLUP PHR ON 2000FT
O CP PULLUP PHR ON 2000FT

LONG PULLUP PHR ON >6000FT

CP PULLUP PHR ON>6000FT

X LONG PULLUP PHR OFF >6000FT

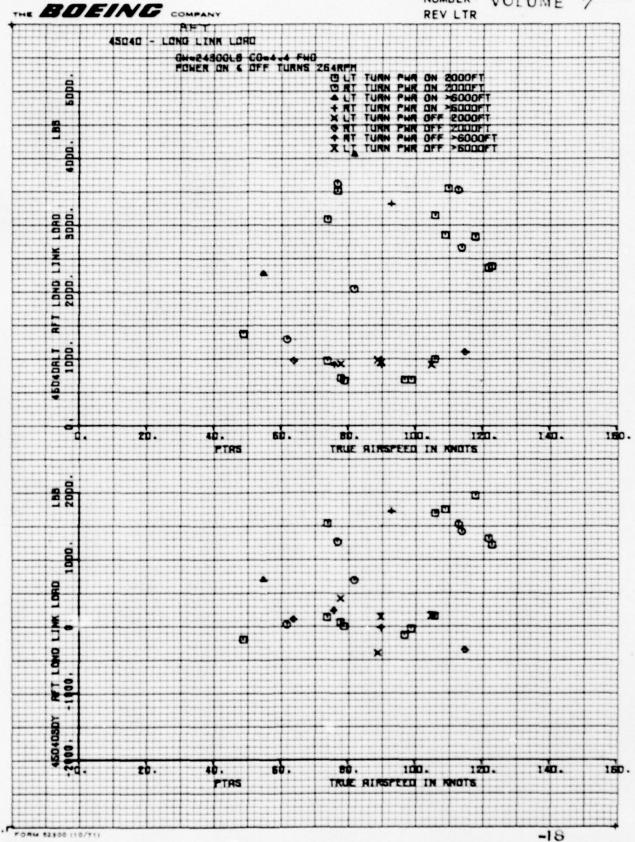
CP PULLUP PHR OFF >6000FT

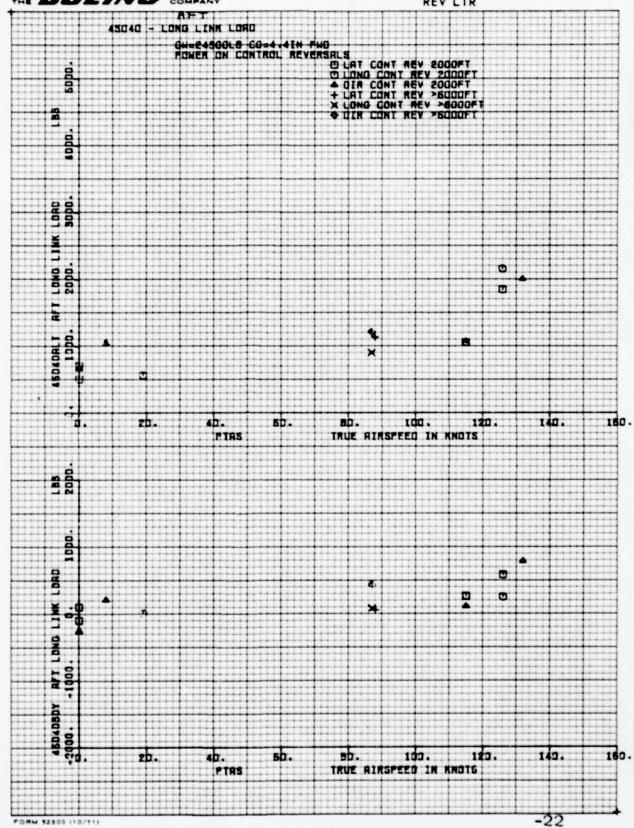
CP PULLUP PHR OFF 2000FT

X CP PULLUP PHR OFF 2000FT 6000 0 + LOND LINK 2000. X AFT 0 × + 40. zb. 100. 140. 160 . 50. BD. 120. PTRS TRUE RIRSPEED IN KNOTS 2000 1000 0 X ~o. 60. 120. 140. 40. 80. 100. 160. 20. PTAS TRUE RIRSPEED IN MNOTE

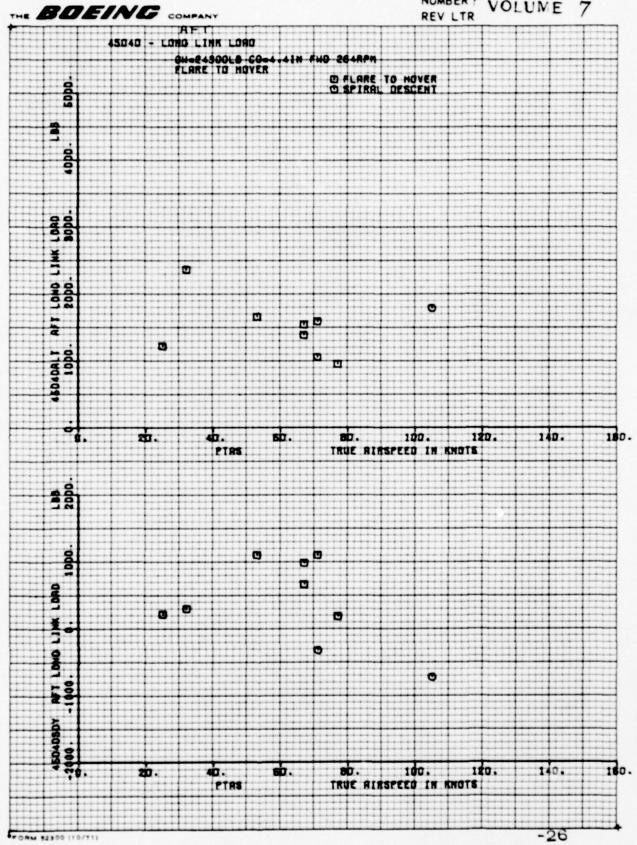
FORM \$2300 (10/71)

NUMBER! VOLUME 7

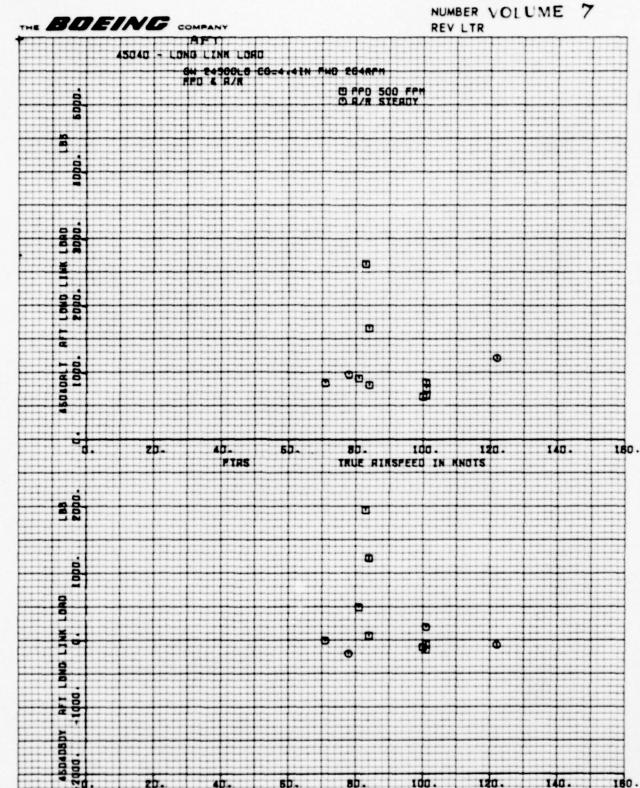




D210-11168=3 NUMBER VOLUME 7



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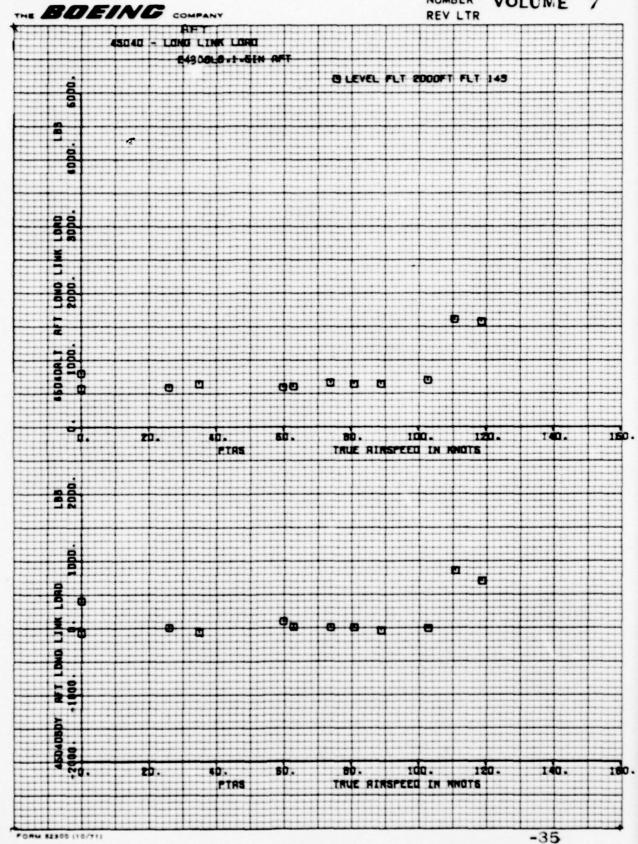


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FORM \$2500 (10/71)

TRUE RIRSPEED IN KNOTS

-30



PREPARED BY: J. Bendo

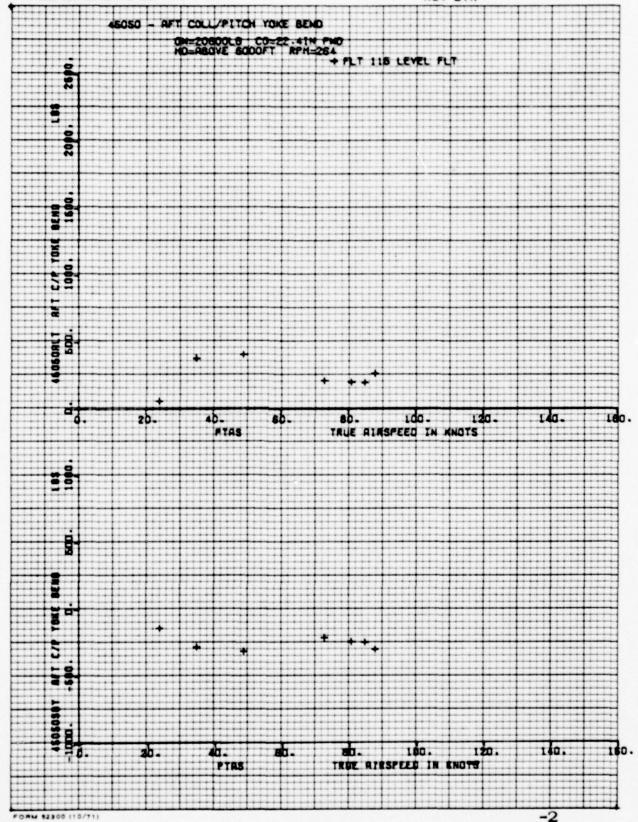
NUMBER D210-11168-3 REVLTR Volume 7

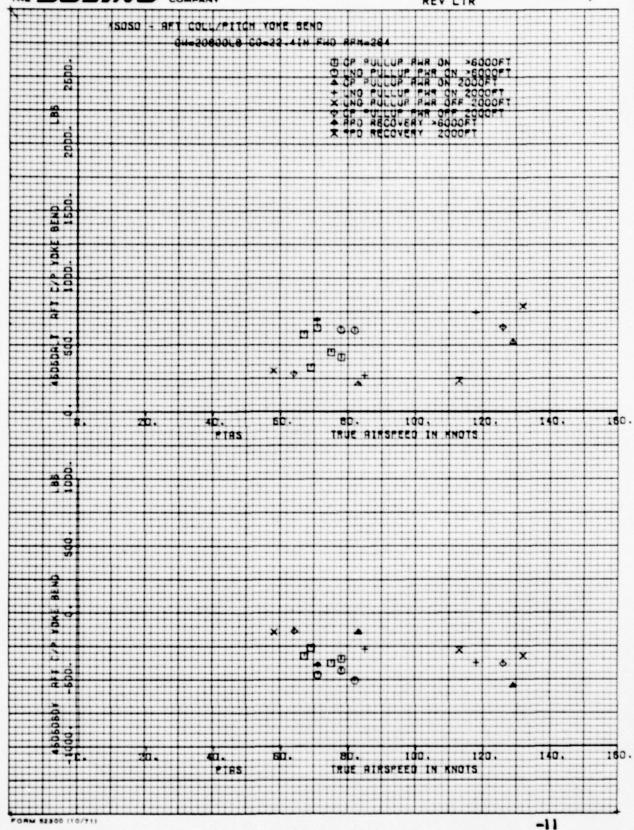
MODEL NO.

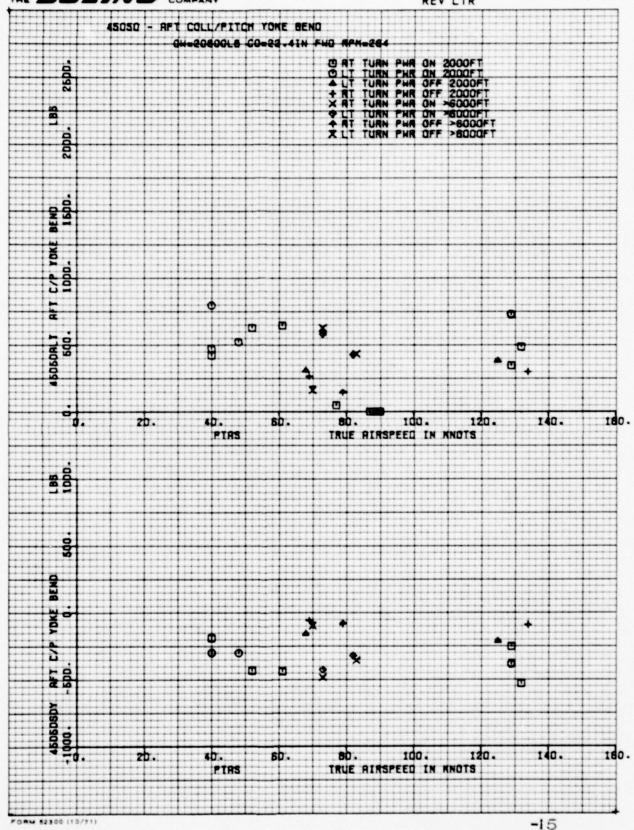
THE BOEING COMPANY DATE:

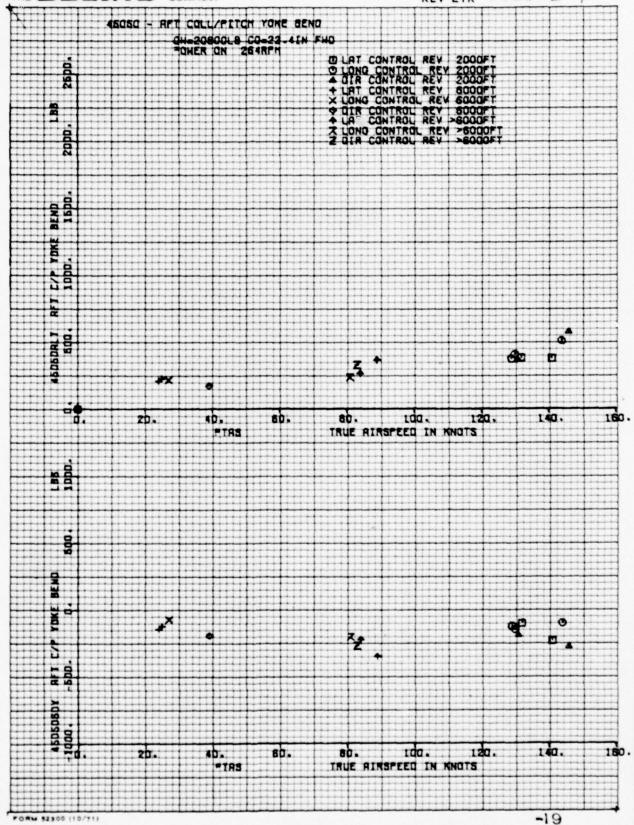
CHECKED BY: 8/28/78

4.10 Aft Collective/Pitch Yoke



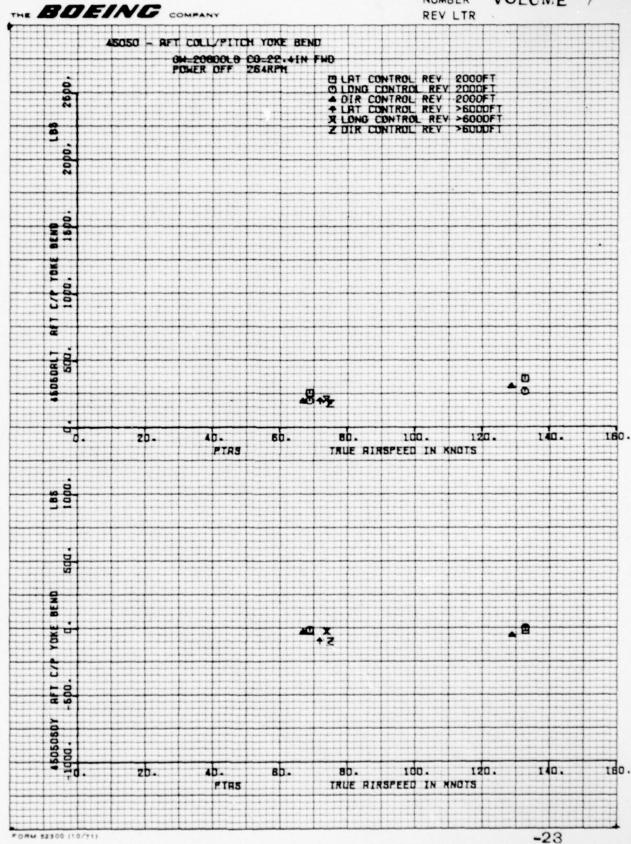




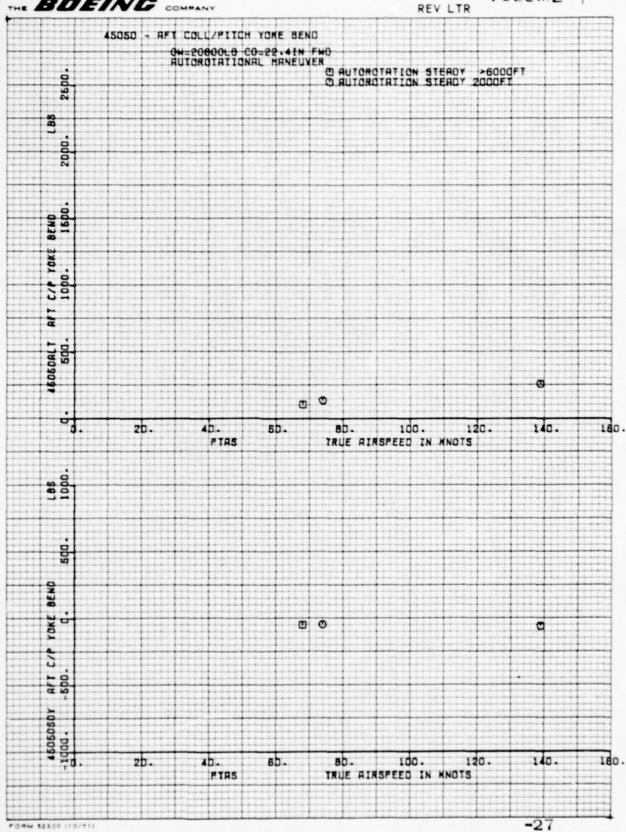


SHEET 340

D210-11168-3



NUMBER



FTRS

FORM \$2300 (10/71)

TRUE RIRSPEED IN KNOTS

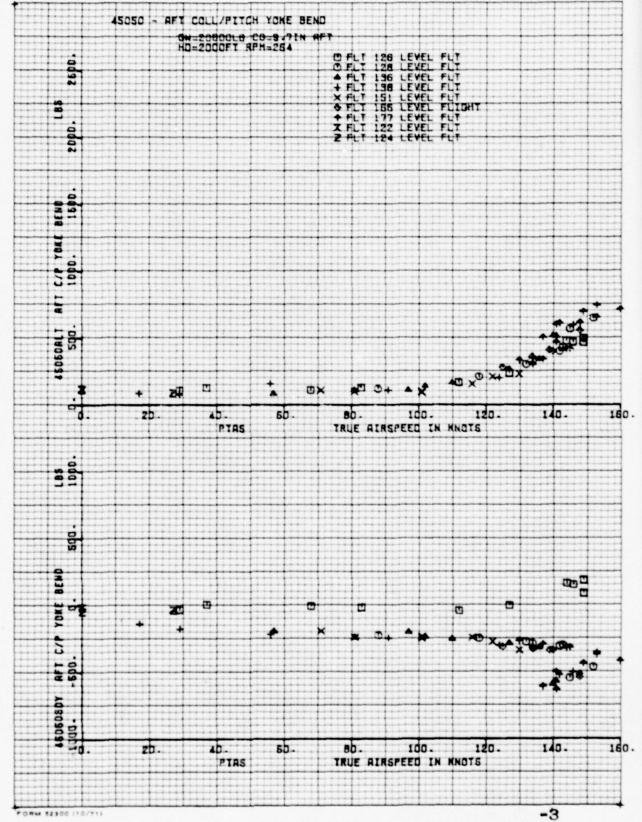
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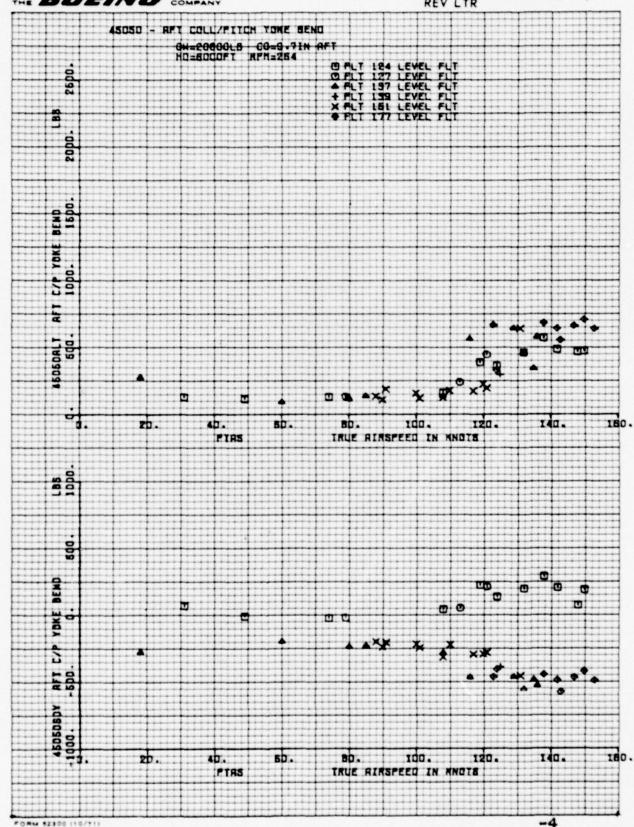
NUMBER ' VOLUME 7

THE BOEING COMPANY

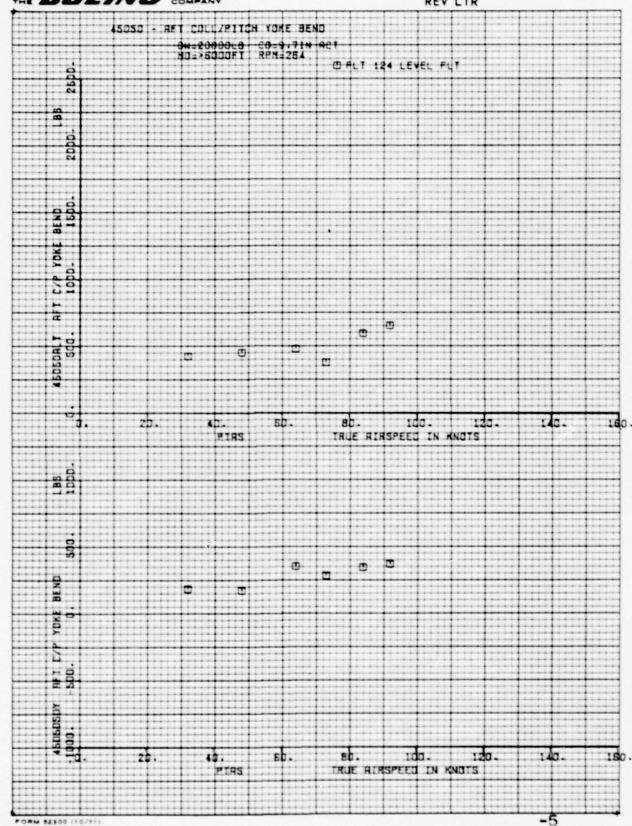
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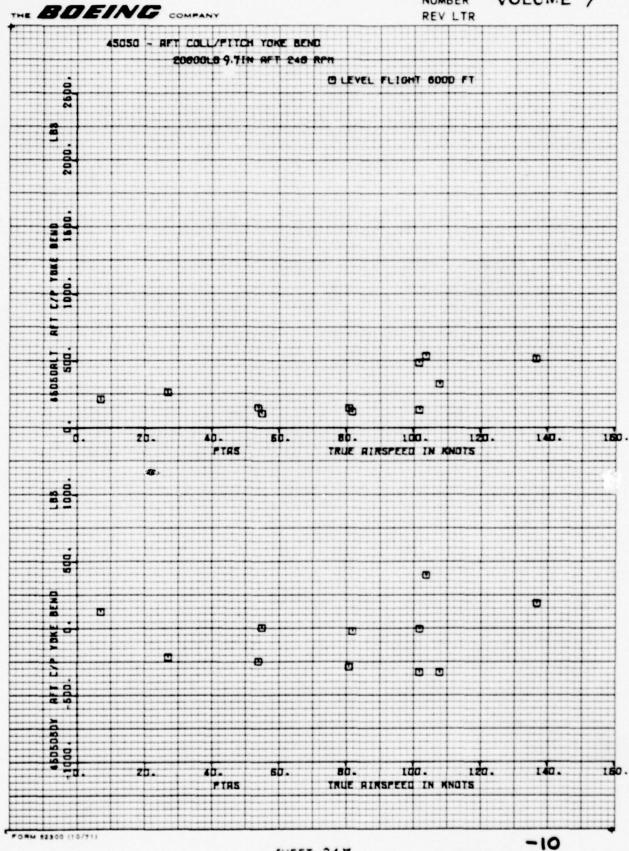
REV LTR

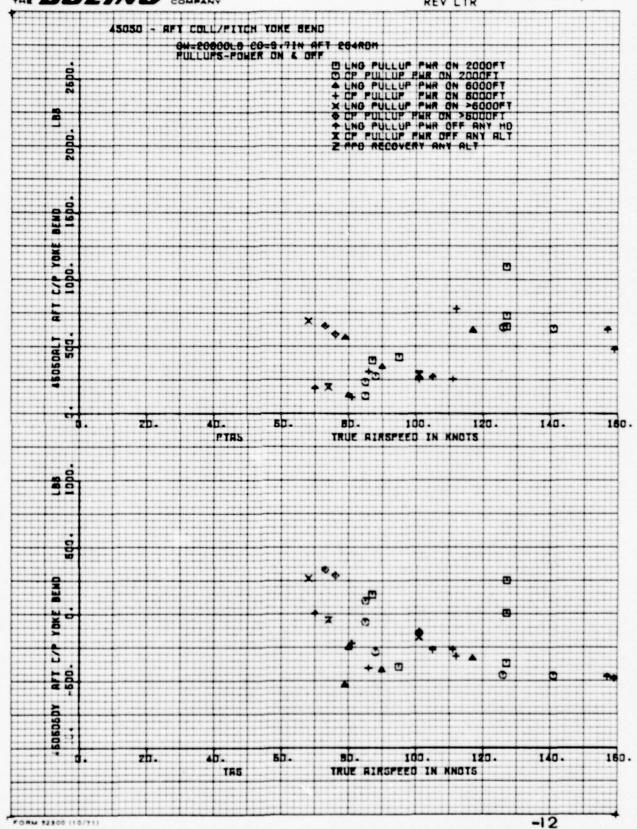


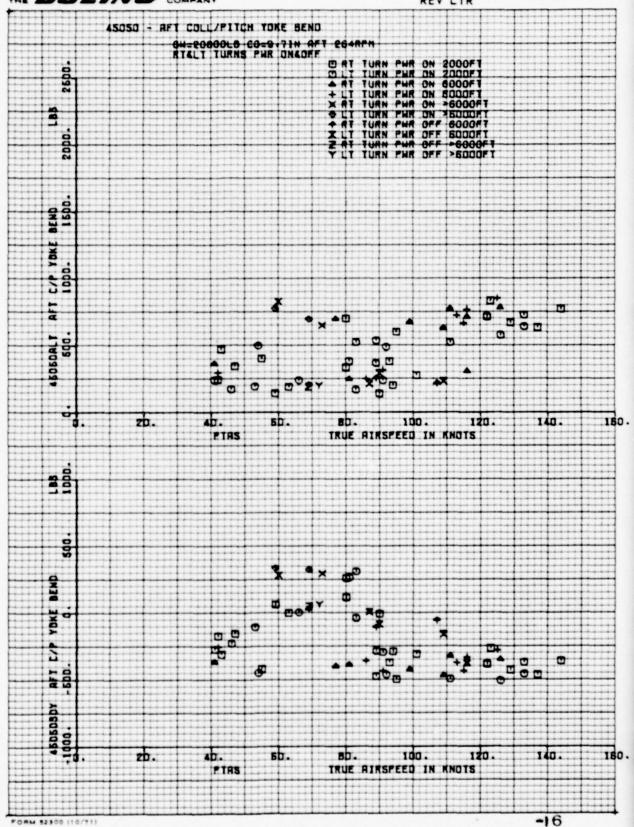


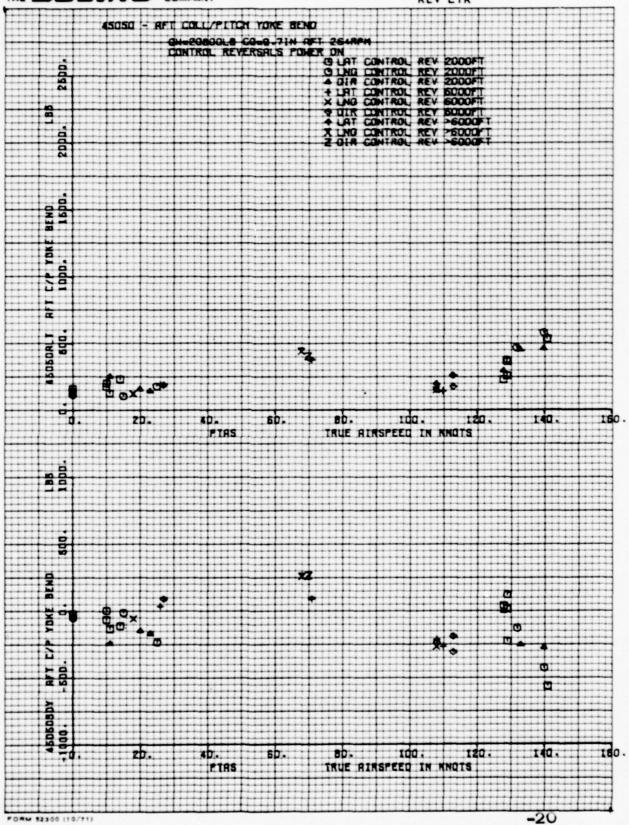
SHEET 345



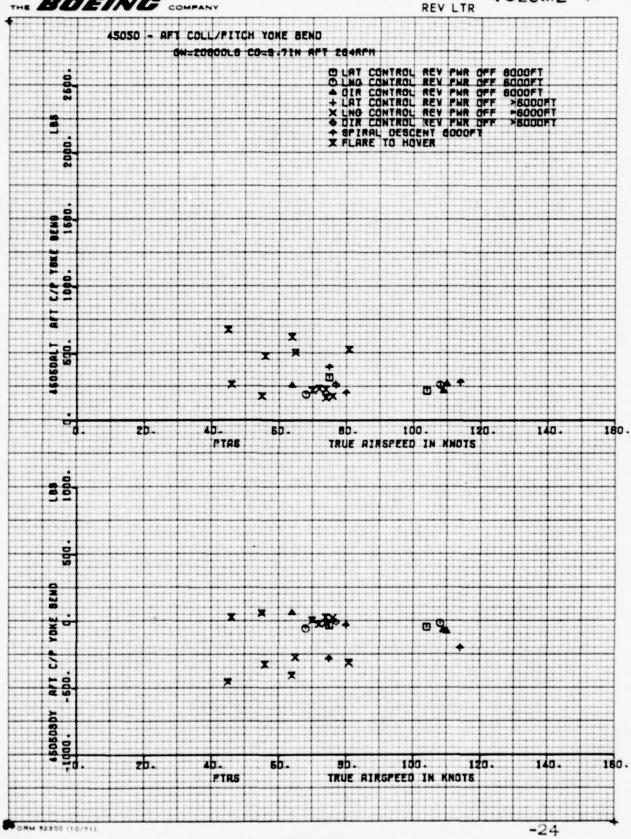




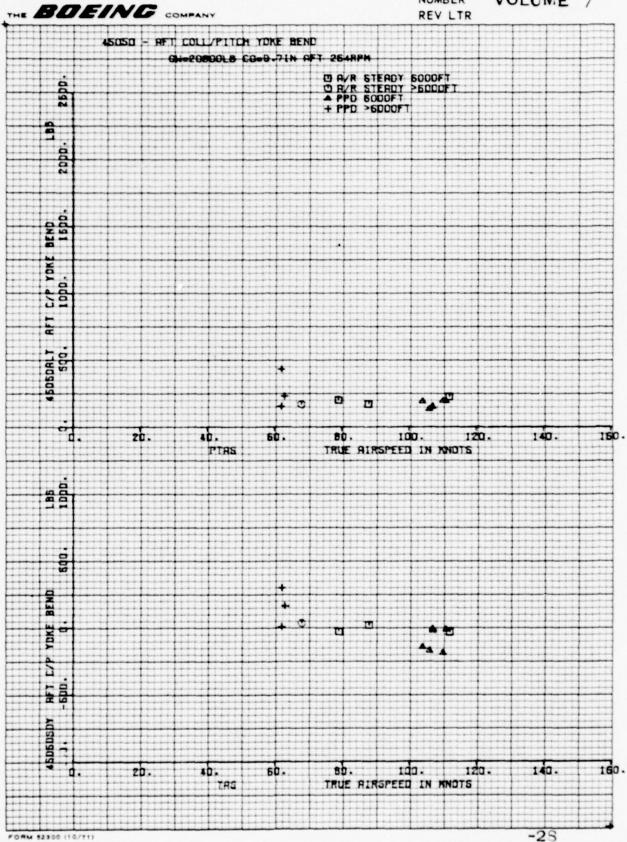


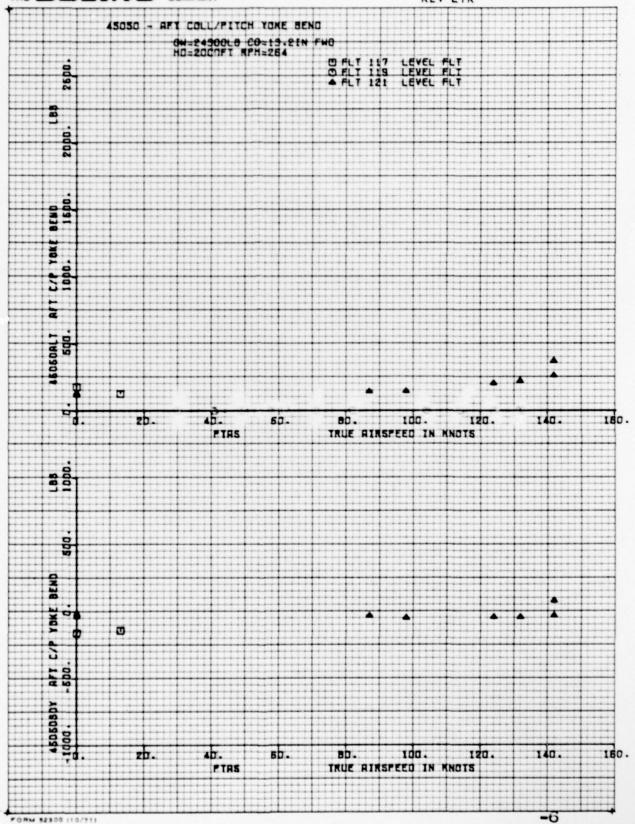


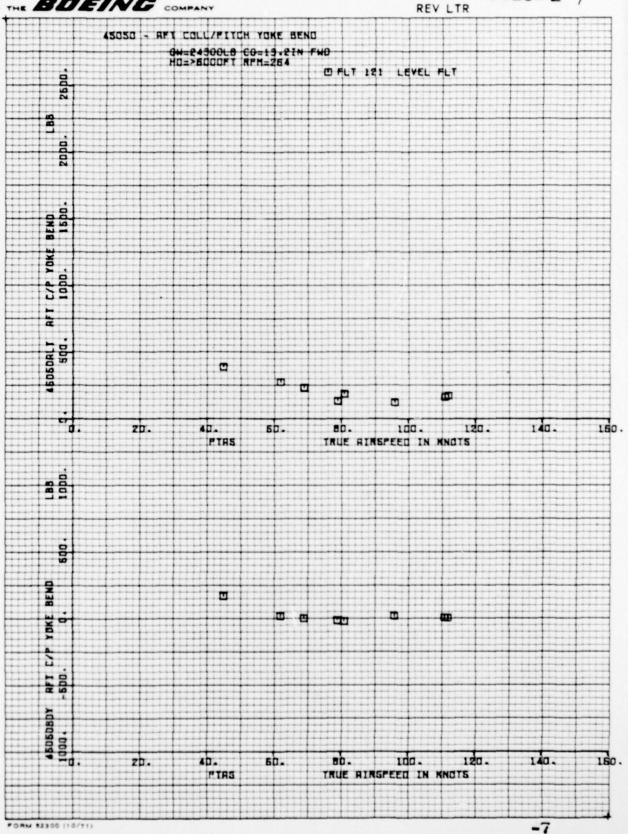


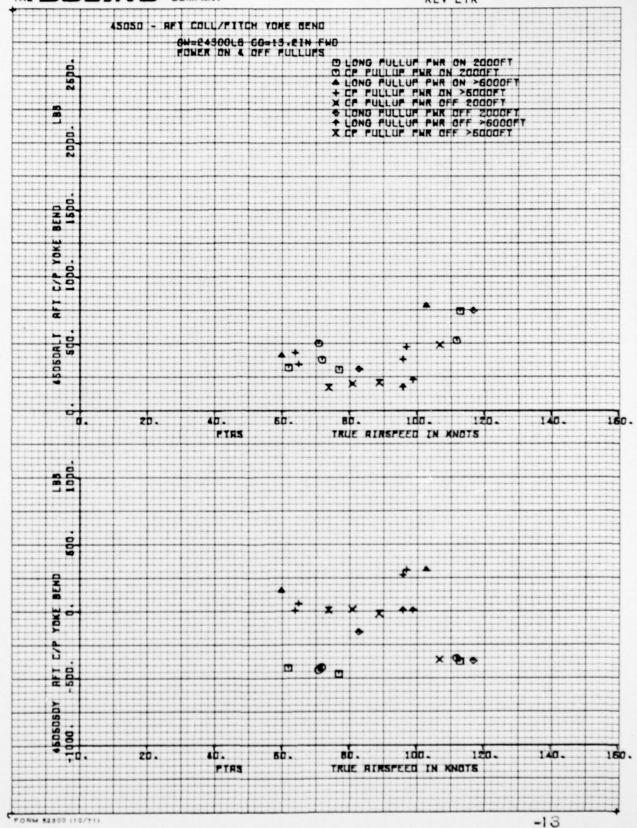


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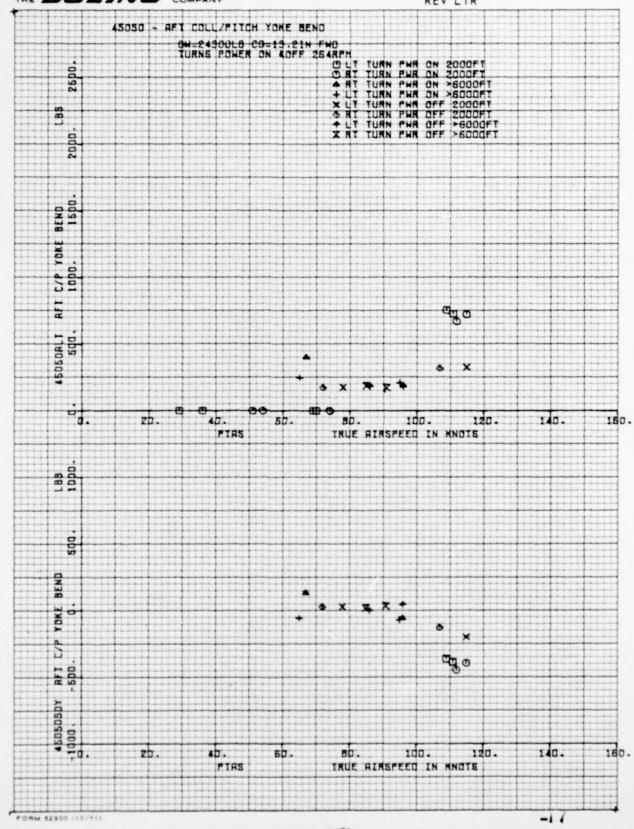








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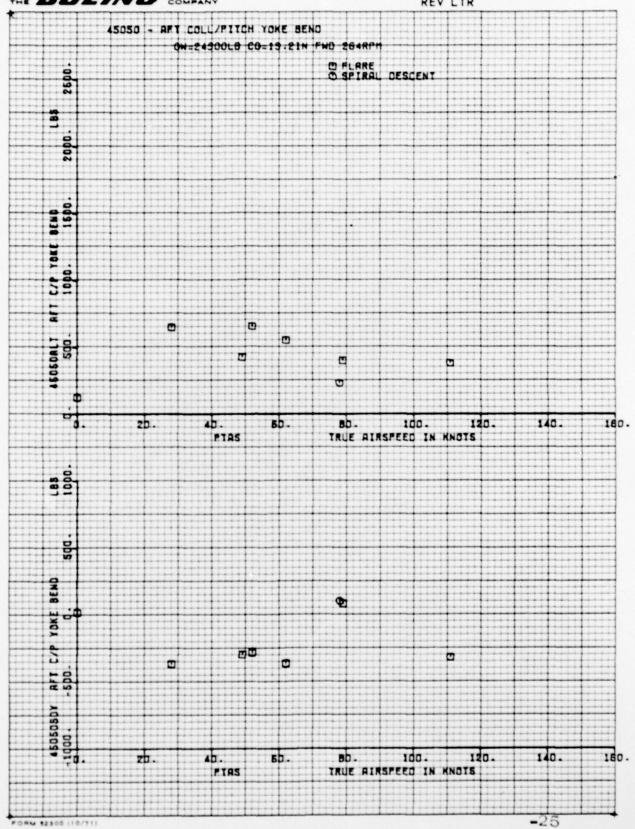
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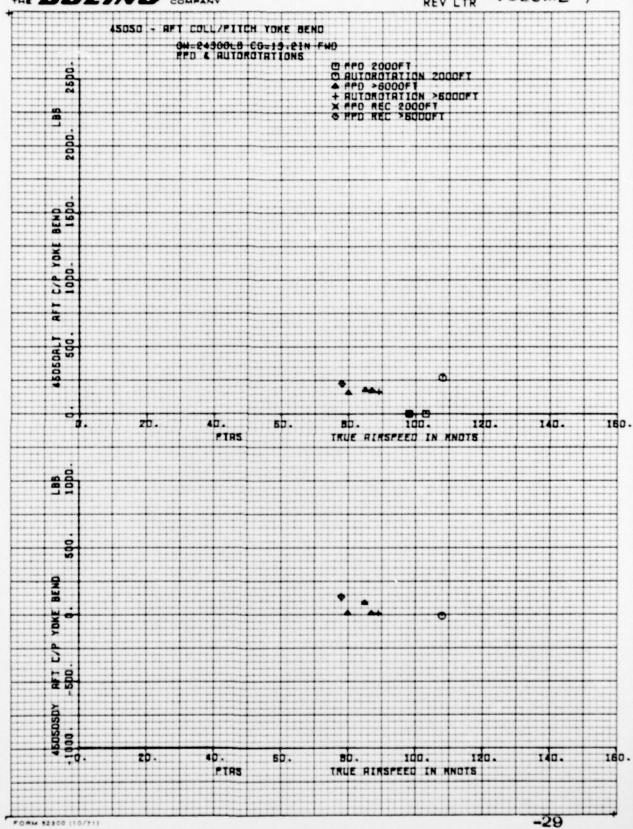
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-21

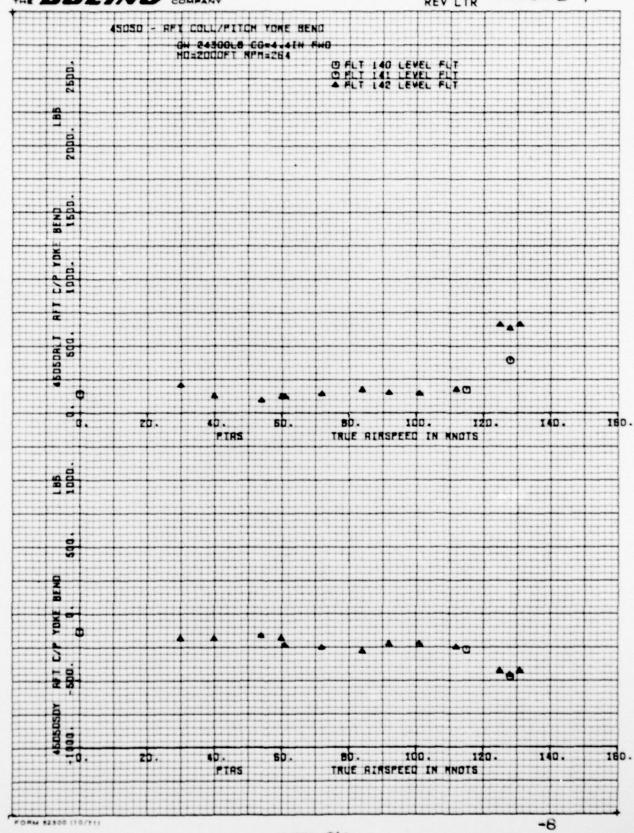
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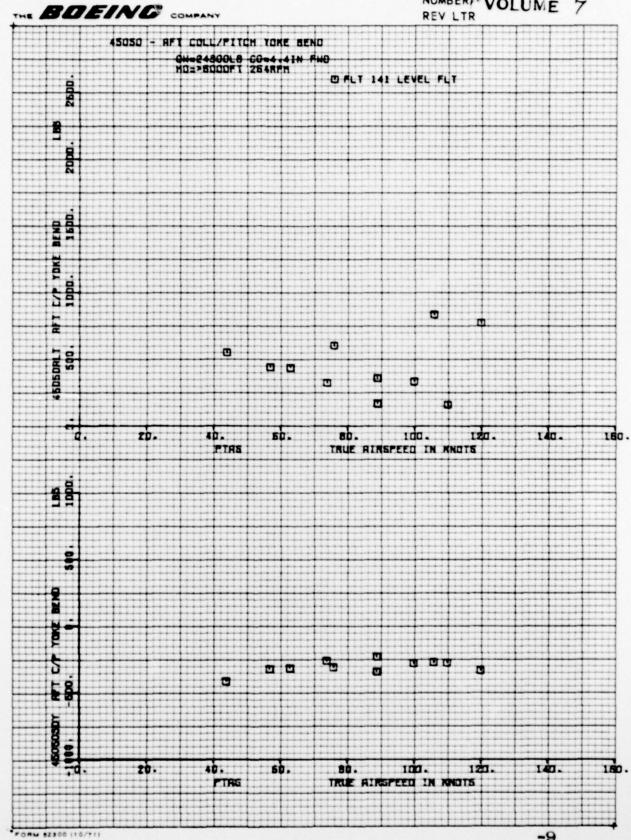


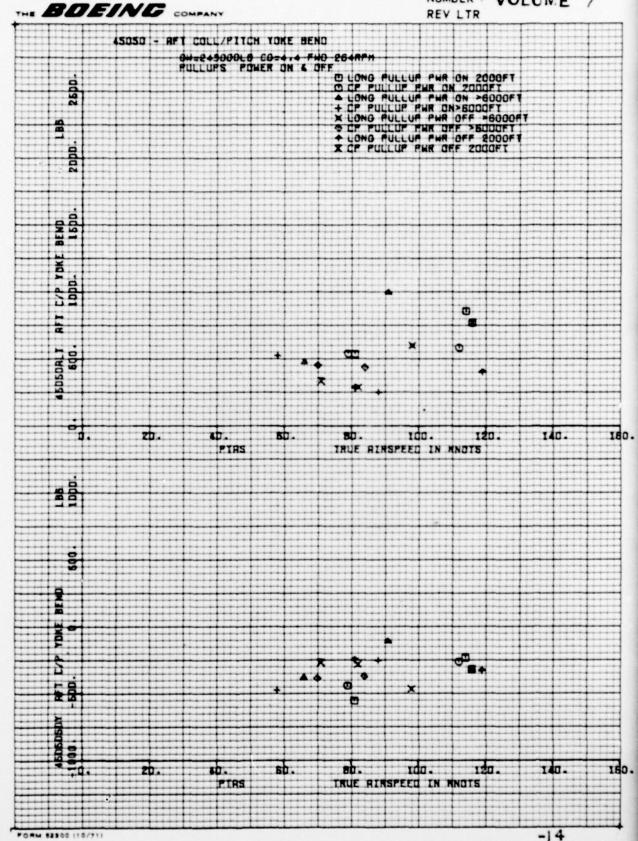


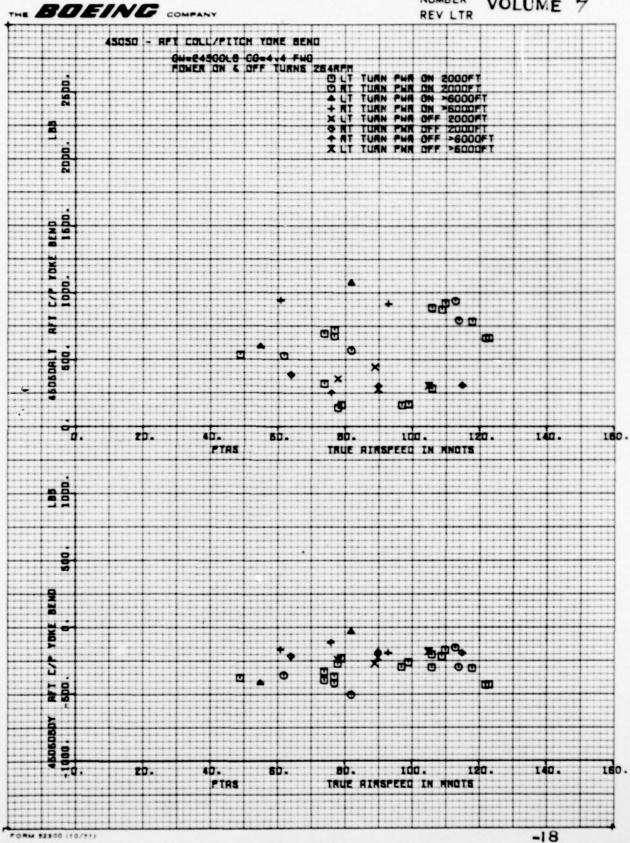


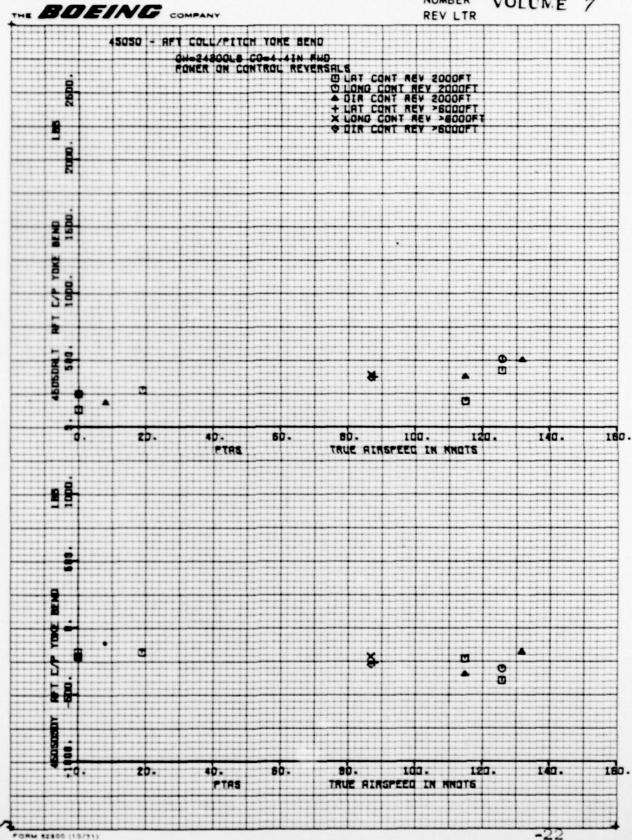


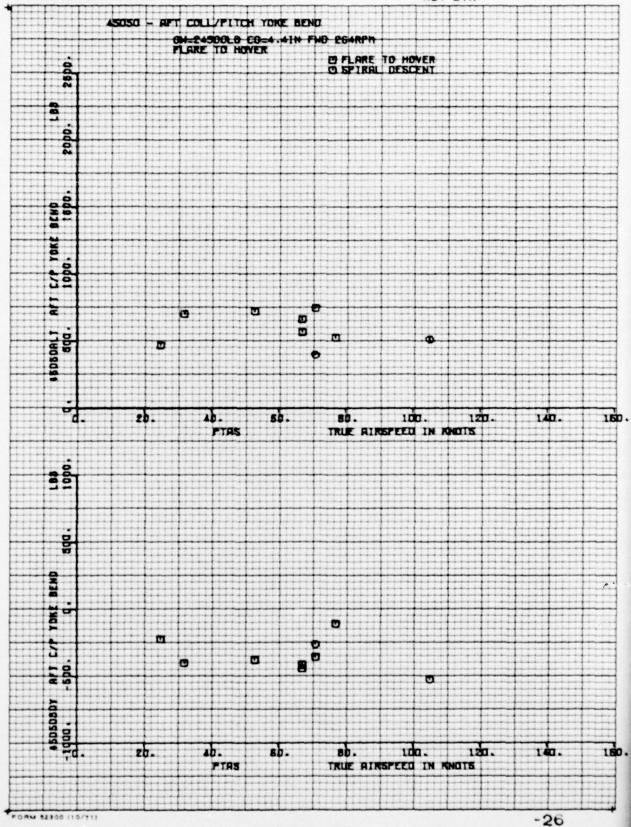
D210-11168-3 NUMBERF VOLUME 7





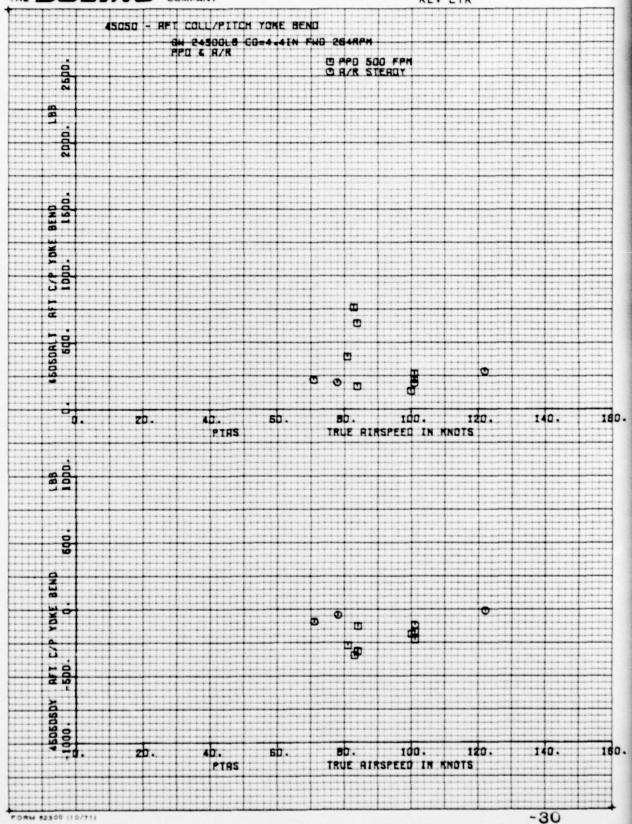






NUMBER VOLUME 7

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NUMBER REV LTR VOLUME 7

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